M&L CAHIER 10

Belgian Hospital Architecture

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Agency for Town and Country Planning
and Immovable Heritage

BELGIAN HOSPITAL ARCHITECTURE

Cover picture:
The western façade
of the wards of the
Sint-Jans hospital
in Bruges
(photo O. Pauwels)

Belgian hospital architecture

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◄
The Héger-Bordet
institute
in Brussels (1939)
after a design of
Georges Brunfaut
en Sta. Jasinski
(photo O. Pauwels)

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The hospital
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(photo F. Dor
© MRW)

▶▶
The psychiatric
centre dr. Guislain
in Ghent after
a design of
A. Pauli, 1853-1876
(photo
K. Vandevorst)

FOREWORD

Up to now, a reference book on hospital architecture in Belgium was still missing. Nevertheless, hospitals are quite curious structures, even if the only reason is that we are born in one, we might quite possibly die in one and during our lifetime we are treated there for illnesses and diseases. Many of these Belgian hospitals are listed as monuments and stand out in townscapes thanks to their dimensions. The Belgian patrimony preserves hospitals from their earliest origins in the 10th – 11th century up to the remarkable modernistic creations of well-known architects.

Hospitals were founded in the time of the pilgrimages, where the need arose to shelter and accommodate traveling believers on their journey. They executed several of the essential works of mercy: feed the hungry, slake the thirsty, care for the sick, bury the dead and shelter the pilgrims. After a long evolution, the main assignment of hospitals was to take care of the sick.

The architecture of these hospitals and their multiple expansions and renovations reflect the progress and the new insights in the field of medicine. Furthermore, the political evolutions and the rise of laicization changed the appearance, the management and the organization of hospitals.

Belgium possesses a quintessential patrimony of old and less old hospital buildings, of which some are ready for reallocation. One example of this is the respectable Sint-Janshospitaal in Bruges, which has been turned into an enjoyable museum that mainly focuses on the panels painted by Hans Memling. Another prime example is the Notre.Dame à la Rose hospital in Lessines, which has also been converted into a museum; not to mention the Saint-Gilles in Namur, which is now the seat of the Walloon parliament. In modern day times, leprosaria and sanatoria are also lacking purpose in the field of medicine and are therefore up for reallocation as well. At present, several other hospitals have managed to maintain their original function and are notable monuments in various townscapes thanks to their grandeur.

The book zooms in on the history of hospital architecture from some of the oldest examples right up to the hospitals of the interwar period. Treated in this book as well are: sanatoria, military hospitals and psychiatric hospitals. There's also a special chapter on hospital museums and collections on medical science. In an alphabetical guide, the second part of this book offers a selection of some of the most peculiar Belgian hospitals. May this issue be an incentive to handle this significant patrimony with the utmost care and to display some creativity in preserving the inherent value of these monuments of history, art and medicine, with the respect they deserve, for generations to come.

Gilbert KOLACNY

Administrateur-generaal
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Ruimte en Erfgoed

PREFACE

The system of Belgian hospitals with its wide-ranging accessibility, affordability and excellent quality is one of the best organisations in Europe and in the world. This is also due to the early development of the hospital system's in this country. The fortieth anniversary of the Hospital Law on 23rd December 2003 seemed a suitable occasion to review the past of this hospital system.

When we decided to publish a book on the history of hospitals in 2003, we relied on very enthusiastic staff and experts, who collaborated, with knowledge and experience and free of charge for two years. However, this book could not have been published without the unique cooperation of the Federal Government and the Ministry of the Flemish Community, the Department of Monuments and Landscapes, the Committee for the History of Hospitals, the Brussels OCMW, the Ministry of the Brussels Capital Region, the department for Monuments and Landscapes and the patrimony department of the Ministry of the Walloon Province.

Through the rich heritage of Belgian hospitals, this M&L-Cahier delves far back into the history of hospitals with its gradual developments and highlights, from the time when they were created until today. The hospital system of the future is only touched upon, but perhaps this cahier is a source of inspiration for people who are confronted with hospitals on a daily basis, like doctors, nurses, paramedics and architects, whom we would like to honour and pay respect to here for what they have achieved today and in the past.

Christiaan DECOSTER

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Sigrid Dehaeck and Robrecht Van Hee

FROM INFIRMARY TO VIRTUAL HOSPITAL?

▶ Hospital sisters of the Sint-Jans hospital in Bruges (picture from 1858 © Stedelijke musea)

Sooner or later everyone will have some involvement with hospitals: one is born or dies there, one is cared for when ill. This has not always been the case, but is the result of a centuries-old development. In the Middle Ages and the Modern Era for instance, they were not called hospitals, but infirmaries or hospices: not only the infirm were admitted, but also the poor and pilgrims. Although the latter were probably sick in many instances, the focus of these institutions was not on examining and healing the sick, but on hospitality and charity.

This M&L-Cahier presents the rich heritage of monumental and historical hospitals. The architecture of seventy hospitals from the 12th century through to the Second World War has been placed in its historical context. Many hospitals are fully or partly protected as monuments or as part of the cityscape because of their architectural, aesthetic, historical, and scientific value, or for their value as a part of folklore.

More than any other monuments, hospitals have to deal with the problem of losing their original purpose and the challenge of suitable redevelopment.

Some hospitals have been demolished; others are vacant and are waiting for a new function. Others have been renovated to become cultural centres, museums or archival facilities. Fortunately, many have kept their original functions as care centres. For old hospital complexes in particular, it has become difficult to combine the requirements of good monument management with the modern concept of caring for the sick.

In their book *'The hospital: a social and architectural history'*, Thompson and Goldin write that hospital buildings have reflected ideas on 'hospitalisation' over the ages. They distinguish, however, between functionally designed hospitals and hospitals that have 'borrowed' their architectural characteristics from other buildings like monasteries, abbeys, and palaces, as well as prisons and barracks. Indeed, the consciously functional buildings are also the heritage of the architectural styles of their day and at the same time of other aspects of religious and political life. From the Middle Ages to today, economical, political, social and cultural aspects and convictions have directed and influenced the hospital system and its architecture in varying degrees.

▲
The infirmary of Villers (photo O. Pauwels)

HOSPITALS IN THE MIDDLE AGES AND THE MODERN ERA

The oldest Belgian hospital buildings, many of which are now open to visitors, have been restored and sometimes supplemented with buildings of a later date, and date back to the 12th and 13th centuries: Sint-Jans hospital in Bruges, the Bijlokehospitaal in Ghent, the hospital at Damme. The hospitals in Oudenaarde, Kortrijk, Asse, Herentals, Hasselt, Geraardsbergen, Namen, Doornik and Lessen were also founded during this period but only recently have they become listed heritage buildings. Politically speaking, in the 12th century the present territory of Belgium was a patchwork of country delights governed by counts, dukes or Prince-Bishops who in turn were also dependent on the French king or German emperor. These bigwigs has little to do with the everyday running of a hospital but many of them were donators to a hospital foundation. Bishops, monastic orders, city burgers, high-ranking officials, guilds and members of the nobility were able to establish a hospital or donate money, goods or land to it. Landownership was very important for a hospital institution: being self-supporting reduced financial problems and guaranteed the long life of the institution.

The development of agriculture, industry and commerce resulted in a large growth of the population in newly established cities where hospitals were set up to offer shelter to the weak, poor and sick in the cities. Through the urban character of medieval hospitals and the catholic status of the staff – who had generally adopted the rule of St. Augustine from the 13th century onwards – most hospital institutions were subject to a double jurisdiction: urban and canonical legislation. From the creation of the hospitals until the end of the Ancien Régime city, church and hospital community competed with one another for participation in financial affairs, administration and caring for the sick. Although one could say there was a general centralisation policy in the Burgundian period this did not really apply to hospital institutions. Through a lack of coordination the power remained with the church and local governments.

The principal buildings in a medieval hospital were the chapel and the ward. The inseparability of ward and chapel attests to the great importance of the Christian religion. To attend a mass or at least hear this, could support the ill believer in his recovery or, if his illness was terminal, prepare him for the hereafter. For the sisters, brothers or laymen who worked in the hospital, the hospital was the ideal place to practice the works of mercy: the feeding of the hungry, the slaking of the thirsty, the caring for the sick, the burying of the dead and the providing of shelter for pilgrims.

In hospital accounts one can often find payments made to barbers and chirurgeons. They represented the medical practice, which primarily consisted of enemas, bloodletting and the care of wounds and fractures. Medicines were prepared on the basis of plants and herbs by herbalists or apothecaries. There were but few real physicians to be seen in a hospital: the status and fees of the medical practitioner were just too high for the hospital and for the poor people addmitted to this.

For infectious diseases, such as leprosy a specific facility was provided. Although charity played an important part in the foundation and development of hospitals, leprosariums found their origin in other factors. In order to protect the citizens against infection, as well as safeguard trade in the flourishing towns and cities, the lepers were isolated and monitored. Although at that time people did not have an understanding of bacteria, one was nevertheless aware that with proper hygiene measures a person could prevent infections. The chapel of the leprosarium of Chièvres and the leper house at Rumst are rare examples of still to be seen institutions of this type.

In contrast to leprosy, pestilence was much more deadly, more acute and more infectious, which led to plague houses being too small during outbreaks, yet useless during other periods. During an outbreak, plague victims were therefore often admitted to hospitals.

Care of the sick also took place in the infirmaries of abbeys: sick or old brothers were cared for here by their colleague brethern until they could again participate in the religious life of the abbey which was comprised of prayer and work. The dying brother spent his last hours in the infirmary, through which this became a sacred place of transition between the earthly cloistered life and the hereafter.

▲
A Miniature of health care in the rule book (1238) of the Notre-Dame hospital in Doornik

Institutions were also established during the Middle Ages, where old town-dwellers could find accommodation and care until their death. They were called *godshuizen* in Dutch and *hospice* in French. This book only treats a handful of *godshuizen* with certain typical and important architectural characteristics.

Due to the population growth in towns and cities, it became necessary to expand the original medieval hospital wards. For example, the Sint-Jans hospital in Bruges saw systematic expansion from the 13th to the 19th century. Some hospitals were destroyed by fire or wars after which new hospitals were built on the same site or sometimes also on another parcel of land. A number of old hospitals with building components from the 15th to the 18th century, are covered in the Guide: the Onze-Lieve-Vrouwe hospitals of Kortrijk and Oudenaarde, the Sint-Elisabeth of Diest and Herentals, the *hospice Saint-Gilles* in Namen, the hospital for the incurably sick in Doornik, the hospital of Sint-Julianus van Boussoit in La Louvière, the *hospice des vieillards* in Rebecq, *Notre-Dame à la Rose* in Lessines and others.

◀◀
Chapel and gatehouse of the medieval Sint-Jans hospital in Brugess (photo O. Pauwels)

▶ The leprosarium of Rumst (photo O. Pauwels)

▲ Interior of the 17th-century chapel of the hospital *Saint-Julien de* Boussoit in La Louvière (photo F. Dor © MRW)

▶ Mural of the Last Judgement (16th century) in the leprosarium of Rumst (photo O. Pauwels)

At the beginning of the 16th century, Emperor Charles V endeavoured to more efficiently organize the relief of the poor and the structure of the urban institutions. During this period, the whole of Western Europe was namely confronted with an immense impoverishment and many beggars sought support from charitable institutions. In the edict of 7 October 1531, provisions were included to help stop people from having to beg and a community fund system was proposed. This imperial edict could however not be applied to many towns: the communal purse incited opposition from the local citizenry and the Church, who wanted to retain power over institutions. Emperor Joseph II would later also be unsuccessful in reforming and centralising the hospital system in the Austrian Netherlands.

According to Thompson and Goldin, hospital institutions from the period from the 15th to the 18th century had architecturally in common that they were built on the basis of 'borrowed' ground plans: there was no new specific architecture formulated for hospitals, yet elements were adopted from the existing architectural styles of cloisters, colleges and rural architecture. The hospital could be a rectangular building, have a U-shape or consist of four wings around an inner courtyard. The façade of the hospital building was built in the style which prevailed at that time. As a consequence, a complex of buildings was sometimes comprised of several styles. The hospital of *Notre-Dame à la Rose* in Lessines is, for example, a mixture of late Gothic, Renaissance and Baroque styles.

From the 15th to the 18th century, the number of poor and marginalised members of society continued to grow. To keep this group under control in the Spanish Netherlands, and later the Austrian Netherlands, law enforcement institutions were formed in the 17th century, also known as houses of correction and were similar to those in Britain,

◀
The cloister garden of the Notre-Dame à la Rose hospital in Lessines (photo G. Focant © MRW)

◀
The Saint-Gilles hospital in Namur (photo G. Focant © MRW)

▼
Rear of the hospital for the incurably sick (17th century) in Tournai (photo F. Dor © MRW)

▲
Interior of the chapel of the Onze-Lieve-Vrouw hospital (1761) in Geraardsbergen (photo K. Vandevorst)

France and Austria. They were established in Antwerp, Brussels, Ghent, Bruges, Mechelen and Mons. Such institutions are not covered in this book, even though they did take over some of the specific social taks of the hospitals.
Although the 17th and 18th century were very weak economically, medical science developed through the progress made in natural science and experimental research. These developments led to a better differentiation and classification of diseases. Precursors were Andreas Vesalius who already in the 16th century published a book on anatomy and William Harvey who discovered the circulatory system. Jan Palfijn (1650-1730) played a significant role in tne development of surgery and obstetrics.

HOSPITALS IN THE 19th CENTURY

The French revolution and the subsequent reformations during the French period of the Southern Netherlands (1794-1814) brought an end to numerous existing structures. A Commission for almshouses was established for the care of the sick, orphans and the elderly. The hospitals and houses of God were public institutions, managed by a municipal committee. The religious orders were dispensed with during the period between 1797 and 1809. The Office of benefaction provided for home care for the poor. This situation continued up to the establishment of the Commission for Public Relief in 1925 (in 1976, the name changed to Openbaar centrum voor maatschappelijk welzijn or OCMW, in English, Social Welfare Board).

In the 19th century, new insights and experiences led to new hospital architecture, namely that of pavilion hospitals. Already employed in castles in the 17th and 18th century, this type of construction was now being used to design and build hospitals. Pavilion construction allowed for the decentralisation of the buildings to counteract infection. Sufficient light and fresh air, two elements which were required to be unconditionally present in order to create a positive climate for the sick, were ensured by high windows in the two long sides of the pavilions, as well as by spreading out the buildings over a large domain.

The field hospitals or tents for the care of wounded war soldiers, can be considered to be the actual forerunners of the pavilion hospitals. During wars, wounded or sick soldiers tended to recover faster in a tent or a field hospital. A throry developed

◀ Pavilion of the Brugmann hospital (1923) in Brussels (photo O. Pauwels)

▲ Front of the monumental central building of the Stuyvenberg hospital (1878) in Antwerp (photo K. Vandevorst)

that through constant ventilation wound fever and other infections could be avoided. In scope of this "fresh-air-therapy" tents or field hospitals were erected near various hospitals.

The Sint-Jans hospital in Brussels – built in 1843 and demolished in 1952 – was a pavilion complex. The distance between the buildings was 10 metres and the buildings were comprised of two floors. The Brugmannhospitaal in Brussels (1923), designed by Victor Horta, is a late and profound aesthetic example of pavilion construction.

Following up on the pavilion structure, architects experimented with new structural shapes. The architect Baeckelmans received international renown for his design of the Stuyvenberg hospital in Antwerp (1878). The round wards, which facilitate the supervision and promotes the air circulation, were praised and copied abroad. However, total decentralisation also had its disadvantages: more maintenance, more equipment, more materials, more labour and more financial resources.
Not all hospitals from the 19th and the beginning of the 20th century were pavilion hospitals. Many hospital architects were still inspired by the groundplans of cloisters or castles. The Brussels Groot Godshuis (later named the Pacheco Institute), completed in 1827, was built around two inner courtyards in Neoclassical style. The Latour de Freins hospital in Brussels, which opened in 1903,

▶ Sanatorium of Borgoumont (photo G. Focant © MRW)

received criticism due to its castle-like structure and the fact that no physicians were involved in the project.

Scientists such as Pasteur (1822-1895) and Koch (1843-1910) acquired an understanding of bacteriology, so that desinfecting methods became increasingly important to prevent infections. It was found that impure air was not the only or primary cause for infection and that infection also occurred through direct contact with infected objects or unwashed hands. Despite the knowledge of bacteriologists and the new antiseptic and aseptic techniques and bandaging methods, air hygiene remained primordial for a long time and the design of buildings remained decentralised right up to the 20th century.

The hospital as an institute was the preferred place to develop and test new methods of diagnosis.

▲
Inner garden of the Groot Godshuis (1830), presently the Pacheco institute in Brussels (photo O. Pauwels)

Research and social commitments were key concepts. Hygiene was a basic principle: in 1849 the Belgian government established the Hoge raad voor hygiëne [Supreme Council for Hygiene] for a general inspection of hygiene and the implementation of new perceptions. Hospital architects experimented with the ventilation and heating of the buildings. Natural science was an almost inexhaustible source for many changes in surgery and internal medicine.

The operating room became increasingly important, especially after anaesthesia was discovered in 1846.
The medical faculties became involved with the layout of the hospital or began to collaborate with already existing hospitals. The physician was trained in the hospital arts and a university clinic arose in the 19th century. The hospital became increasingly important for all layers of the population.

A large-scale renewal in the 19th century was without doubt that of the growing specialisation: separate and specialised buildings were built for the mentally ill, for those recuperating, for those suffering from tuberculosis and for children. From 1800, buildings were designed and built in which not the body but the human mind would be treated and healed. Prior to the 19th century, the deranged were usually cared for at home. People with a mental illness and a tendency for aggression were committed to mad houses or prison: in Ghent there was, for example, in 1191 the Sint-Jansgast hispital, also named the Sint-Jan-ten-Dullen.
In Geel, in the 15th century, a home nursing system was created. It was only from the beginning of the 19th century that under the influence of science, and in in Belgium specifically under the influence of doctors Guislain and Joseph Triest, the

▲
Rear of the Latour de Freins hospital in Brussels (photo O. Pauwels)

psychiatric institute was born. Interesting examples of this can be found in Bruges, Ghent, Geel, Bierbeek, Melle, Zoersel, Ukkel, Luik, Lierneux and Welkenraedt.

Tuberculosis, a lung disease which especially affected the poor classes of the population, would give occasion for the building of impressive sanatoria with a typical style of their own, marked by south side rooms for the patients and balconies which could accommodate beds: the warmth of the sun, fresh air and sunlight were after all the main ingredients of treatment. On the north side there were corridors and functional surgery rooms. Most of the sanatoria which will be further commented on in this book, date from the beginning of the 20th century: the sanatoria at Borgoumont (1903), La Hulpe (1905) and Overijse (1937). With the administering of antibiotics (from around 1950) in the fight against diseases, there would come an end to the development of this type of construction.

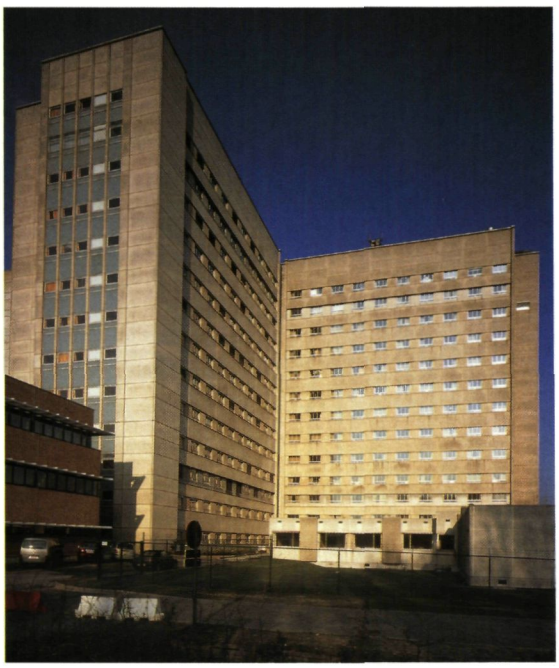
HOSPITALS DURING THE INTERWAR PERIOD

Structural improvements allowed architects, during the interwar period, to increasinly opt for high-rise buildings. Examples, which are further elaborated on in the guide section of this book, are that of the Sint-Pieters hospital (1926) in Brussels, the Jules Bordet institute in Brussels (1939) and the UZ in Ghent (1937, only finished in 1970). Pavilion type construction became outdated because of the air hygiene: ventilation systems and disinfecting methods provided for optimum hygiene. Functionality determined the architecture of the modern hospital. The Universitair Ziekenhuis [University Hospital] in Ghent is the youngest hospital building which is covered in the guide section of this book. It goes without saying that later on many hospitals were built with architectural qualities, but these are not specified in this Book.

▼
Skyline of the south west side of the Sint-Kamillus institute in Bierbeek (1931) (photo K. Vandevorst)

THE CONTEMPORARY HOSPITAL

The welfare state which developed after the Second World War, guaranteed all citizens a number of social rights, such as health, accident and pension insurance. The first hospital act was adopted in 1963. During the period from 1963 up to the present, this act was adapted up to fifty times to meet the requirements and developments of Belgian society. Within the areas of diagnosis and therapy, medicine underwent a great expansion form the 1950s. The media kept the population aware of new breakthroughs and successes through which the expectations of patients grew. Present-day hospitals are therefore, more than ever, attuned to the rational accommodating of patients, with separate structured units for consultations, patient accommodation, operating rooms, medical education, intensive care, sterile rooms, dispensary rooms, laboratories, departments for physiological and occupational therapy, for rehabilitation etc. As such, hospitals become actual enterprises with departments for administration and tarification, business management, kitchen and restaurant areas and management units.



▲ South west side of the central building of the University hospital in Ghent (photo K. Vandevorst)

Hospital construction has consequently adapted over the past fifty years to this new structure. In most cases, buildings have been divided into so-called patient and technical blocks. The first block mostly consists of hospital accommodation, usually built as a high-rise structure, with which the patients are hospitalised in rooms with either single or multiple beds. The second block houses all the other departments.

This approach has led to enormous institutions, in some cases this could lead up to a thousand hospital beds or more. The rationalization of these enterprises has led to hospital institutions merging, in order to enable a more efficient use of so-called heavy and usually, expensive equipment and highly sophisticated machines. University hospitals in particular are often expanded with additional buildings for transplantation units, research laboratories, auditoria, animalaria and other buildings to meet the needs for training young students and physicians, nurses and other qualified personnel. But also other regional and supra-regional hospitals have led construction and architecture to adapt itself to reach the objectives and the functions of the services which were housed in it.

Aerial photo of the University hospital of Ghent (© UZ Gent)

ARE VIRTUAL HOSPITALS A FUTURE TREND?

Critically and creatively dealing with values and perceptions from past and present-day, should enable us to continue our journey from almshouse to hospital in a positive manner. In each hospital there are recurring problems, which people have already been confronted with in the past.
Take, for example, the problem of the hospital bacteria and the resistance to antibiotics. Should we go back to decentralisation? Care of the sick will in the future possibly disappear and be replaced by palliative care for the dying. Is there however adequate psychological and spiritual support for the sick, even for those who are not yet at death's door? Will a psychosomatic approach towards the patient gain territory over a purely somatic one in the future?

Recently, new problems have arisen, which require a solution. The hospital of today and tomorrow is confronted with factors which continually evolve: demography (ageing of the population from 2010), knowledge of the human body and brain, technologies, diseases and such. In order to maximally guarantee health facilities in the future, the Federal Public Service for Public Health is working on a new hospital concept: the classical hospital structure is being abandoned in favour of an interdisciplinary and patient-oriented approach. This department "*deems the hospital to no longer be that of an infrastructure, but defines a hospital, starting from a concept of solidarity, as an instruction with a public character, in particular, the permanent provision of medical-specialist care in a related and multidisciplinary coherent manner*".

A fundamental change, which has already presently begun, is the concept of healthcare programmes. Rather than admitting a patient to a classical medical service, these programmes will indicate the optimum healthcare path of the patient, in which a multi-disciplinary team will apply a holistic approach to the patient and his/ her bodily functions. Healthcare programmes are not bound to the isolated structure of the hospital building, also home care or services outside of the hospital are included in this. It is important that a healthcare continuum is realised within and outside of the hospital. Because of the increasing costs of technological specialisation, collaboration between hospitals will become increasingly more important. This can be ef-

◀ Building of the University hospital in Ghent (photo K. Vandevorst)

fectuated through grouping, mergers, associations, networking and heatlthcare circuits.

The hospital architecture of tomorrow will be required to guarantee maximum flexibility. From an architectural point of view, a design can, in principle, already be obsolete when a building has just been completed. The hospital building will be required to evolve from a more static to a more dynamic concept.

Healthcare programmes are not necessarily bound to one hospital building. The more complex the illness, the more complex the healthcare programme and healthcare facilities will be. Healthcare could become so complex that, in time, the term ' virtual hospital' can be used, in which case the hospital building itself only constitutes a small part of a bigger whole, and the healthcare facilities follow a computer-controlled programme.

BIBLIOGRAPHY

THOMPSON J. and GOLDIN G., *The Hospital: a social and architectural History*, New Haven/London, 1975; IMBERT J. (red.), *Histoire des hôpitaux en France*, Toulouse, 1982; MURKEN A., *Vom Armenhospital zum Grossklinikum. Die Geschichte des Krankenhauses vom 18.Jahrhundert bis zur Gegenwart*, Keulen, 1995; *Annalen van de Belgische Vereniging voor hospitaalgeschiedenis I-IV*, Brussel, 1963-1966; DE SPIEGELER P., *Les hôpitaux et l'assistence à Liège (Xe-XVe siècles), Aspects Institutionnels et sociaux*, Parijs, 1987; *Patrimoine hospitalier. Un parcours à travers l'Europe. Ouvrage publié sous la direction de l'Assistance Publique-Hôpitaux de Paris avec le soutien du programme Culture 2000 de l'Union européenne*, Parijs, 2001; IMBERT J., *Le droit hospitalier de l'Ancien Régime*, Parijs, 1993; JETTER D., *Das Europaïsche Hospital von der Spätantike bis 1800*, Keulen, 1986; Website Directoraat-generaal Organisatie gezondheidsvoorzieningen: www.health.fgov.be/ vesalius/.

Griet Maréchal

HOSPITALS DURING THE MIDDLE AGES

▶ Miniature (14th century) of health care in the rule book (1238) of the Notre Dame hospital in Doornik/Tournai

Up to the 11th century, the hospital system was but little developed. The scarce mention of hospitals refer to houses which were open to all 'guests' of the cloister or the church, notably pilgrims and travellers, which is also the literal meaning of hospital or hospital (*hospitare* = to receive guests). The Benedictine vow was not strange to this development as it prescribed that all guests were required to be welcomed as Christ himself. These were not hospitals in the present-day meaning of the word.

THE FOUNDERS, THE CLIENTELE AND THE DISPERSION OF THE MEDIEVAL HOSPITAL

The great change, inherently connected to the development of the towns, occurred at the end of the 11th century and especially in the 12th century. This evolution brought with it new needs as well a new social population group. The initiative towards the establishment of new institutions was taken by the citizens themselves. It's an obvious assumption that these citizens were rich patricians such as the Uten Hoves in Ghent, or traders and artisans such as the blacksmiths in Huy. They had the financial resources to establish hospitals and in addition, they had the political power in the towns.

Even in places where the church played an important role, like in Sint-Truiden, where half of the territory was in the hands of the abbot of the homonymous abbey or, like in Tournai, of the chapter, the contribution of the citizens in the realisation was fundamental. They collected the material means to build or expand, so that in addition to travellers and pilgrims, now also the sick could be accommodated for a longer period of time. The hospital patrimony went hand in hand with the chapter patrimony; the Abbey of Sint-Truiden did not contribute to the hospital. In smaller towns it was sometimes the locally dominant family that

took the initiative, like the lords of Pamele-Audenarde in Lessines. Counts and dukes helped with the further expansion.

The increased mobility led to a need for shelter, not only for the traditional pilgrims and occasional travellers, but also for a peregrinating group of merchants and pedlars, who were closely connected to the development of the towns. These needs could no longer be fulfilled by cloisters and abbeys, often situated outside town centres, even if they wanted to. Also for single people who were much more numerous in towns than in the countryside and who were temporarily stricken by illness, shelter needed to be provided. Moreover, the towns had many who lived in or on the edge of poverty. The increase of workers from the countryside did not only lead to a reduction in wage levels but also led to an increase in unemployment. Being ill also caused unemployment. For the majority of the population, which could only provide for sustenance through labour, unemployment quickly led to poverty and misery. By the end of the 12th century, all the major towns had a hospital, which was considered a haven of refuge for the needy: *the weak* (this often referred to the elderly), pilgrims, homeless people, travellers and those who were poor sick. This was the case for Bruges with the Sint-Jan of which the oldest recorded mention dates from 1188 (but through a study of the archeological remains we know that it already existed in 1150), Atrecht (1179), Ieper with the Onze-Lieve-Vrouw hospital (approx. 1186), Luik (1189), Tongeren (1195), Ghent (before 1196 with Sint-Jan), Brussels (approx. 1186), Chièvres (end of the 12de century).

◀ Aerial photo of Damme, with thet Sint-Jans hospital in the front (© Sint Janshospitaal Damme)

◀ Detail of the truss of the wardward of the Sint-Jans hospital (1270-1285) in Damme (picture by K. Vandevorst)

Those who were contagious, such as lepers, were, however, not admitted. The afflicted were isolated due to the presumed danger of infection. Leper houses are often much older than hospitals: Sint Omaars (1106), Bourbourg (1132), Ghent (1146-1149), Doornik (1153), Hoei (1160), Ieper (between 1128 and 1168), Brussels (1174), Liège (1176), Mons (1182), Atrecht (1186) and Chièvres (between 1167 and 1181).

It was particularly in the first half of the 13th century that many new hospitals were established, so that nearly each town or agglomeration had an institution that took care of the various emergency cases: Oudenaarde, Lessines, Courtrai, Dinant, Antwerp, Deinze, Alost, Dendermonde, Vilvoorde, Lier, Geraardsbergen, Damme (first named Onze-Lieve-Vrouw, later Sint-Jan), Louvain, Herentals (the oldest in the Campine region), Geel, Diest, Hoogstraten, Turnhout and others. Elsewhere, the existing hospitals were diligently expanded such as in Bruges and Brussels, or more were built such as in Ghent (Onze-Lieve-Vrouw hospital before 1204, the Wittoc or Sint-Niklaas hospital at the beginning of the 13th century) and/or they relocated to a better environment or a more spacious site, like the hospitals in Louvain, Ieper and Alost.

◀ Interior of the chapel of the leprosarium (end of the 12th century) in Chièvres (photo F. Dor © MRW)

Monastery and façade of the wardward of the Sint-Jans hospital in Brugess (photo O. Pauwels)

In Ghent the Onze-Lieve-Vrouw hospital became the Bijloke. In order to ensure that they could continue to function, they derived income from significant sources such as market town, cranage, grain rights, fishing rights, succession rights, tolls and other rights. But then the expansion of this polyvalent type came to a halt. An exception to this rule was that of the establishment of the Bavière hospital in Liège at the beginning of the 17th century.

THE CARE PROVIDED

These hospitals operated up to the 19th century within the scope of the care for the poor and not so much within the meaning of healthcare. The medieval hospital firstly provided shelter: people were admitted because they were poor sick. There were undoubtedly those who were committed because they were to sick to walk the streets to beg from door-to-door in order to gain sustenance. Secondly, there was spiritual care: the hospital had to prepare people for death. Medical care came second at best. The spirit took precedence over the body. This is apparent from the importance that was attached to the reception, the good treatment of the sick as opposed to the illness itself, the qualities which the personnel had to have, the limited medical care contrary to the spiritual care, deemed much more important, and finally, the architecture.

On arrival, the sick person was received by the matron who determined the seriousness and the infectious character of the illness. Therefore, not everyone was accepted. People suffering from infectious diseases, such as pestilence and leprosy were, in principle, not admitted, although it wasn't unlikely during outbreaks in the 16th century to come across plague victims. Also the handicapped such as the blind, the crippled, the paralytics, sufferes of at that time considered incurable ailments and the mentally ill, were not admitted. They would, after all, have quickly taken up all the beds. Exceptions were made for those whose care was paid for.
Those admitted were not subject to conditions with respect to their origin, except for pregnant women. In the Sint-Jan in Brussels they could be admitted if they weren't allowed elsewhere. For example, in the hospitals of Alost, Lessines, Geraardsbergen and Ninove, they were not accepted. They were welcome after giving birth, provided that they were lawfully married and from the town itself. If

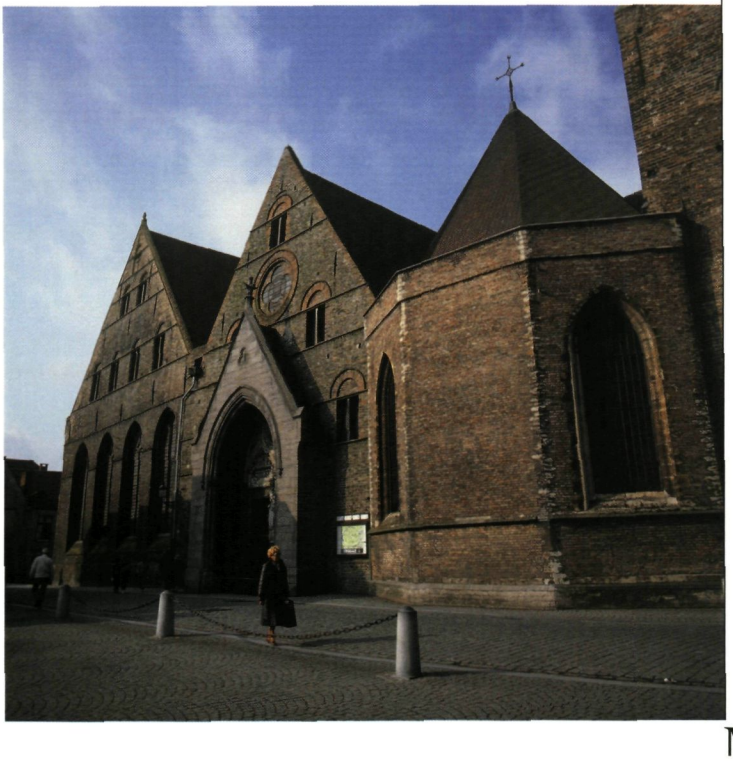
the aforesaid was not the case, then they were only admitted in an extreme emergency. Seeing as many women died during labour, this was a way to prevent having to care for orphans from elsewhere. In the Grand Hôpital in Namur, women in childbed were, on the other hand, assisted by the town midwife.

A stay in a hospital often marked life's final episode. Therefore, the hospital was required to prepare the sick for their death. The unity of hospital ward and altar or chapel bears witness to this, so that the bedridden could follow the service. This is also borne out by the fact that, if he was capable, the sick person had an obligation to make his confession upon admission. The permission to have a priest available who was allowed to take confession, administer the last sacraments and conduct mass, needed to be obtained from the local clergy. Seeing as this aspect, especially that of the burial rights, was quite profitable, obtaining permission was never easy. Any attempts to obtain these parochial rights for the hospital, were later on often mistaken by authors as a struggle over the right to establish or manage charitable institutions.

If the condition of the sick person allowed for it, his face, hands and feet were washed upon admission. The washing of the feet was more of a religious reminiscence of Maria Magdalena, who washed the feet of Christ, rather than a hygienic measure. Once admitted, only the hands were washed. In the Sint-Jan in Bruges there were bathtubs available, but this was no longer the case after the Middle Ages. Water had gained a poor reputation. The beds were required to be made on a daily basis and the pillows had to be plumped up. After the Middle Ages it was also stipulated that both the bed linen and the nightshirts and nightgowns had to be changed. A limited amount of linen, though, made it quite impossible to correctly follow the rules. It wasn't until the 15th century that, on admission, the sick person exchanged his clothes for a nightshirt or, in the case of women, a nightgown. Before this he lay naked in bed with perhaps as little as a headscarf. It is believed that around that same time private beds were introduced. Clothes and paltry effects were stored. Everything was returned to the sick person upon recovery. Shelter, bed and food were free of charge. If the sick person died, then his effects became the property of the institution, which also arranged for burial at the graveyard, in the immediate vicinity of the ward. Whomever left something behind, was fortunate enough to receive

▲ Southern façade of the medieval wardswards and of the cloister of the Sint-Jans hospital in Bruges (photo O. Pauwels)

▼ Eastern façade of the medieval wardswards of the Sint-Jans hospital in Bruges (© Stedelijke musea Bruges)



▲ Interior of the medieval wards in Sint-Jans hospital in Bruges (© Stedelijke musea Bruges)

a real funeral. If this was not the case, then in the worst event, the burial took place without any ceremony whatsoever, at the community graveyard for the poor.

THE ORGANISATION OF THE HOSPITAL

All those who were admitted were accommodated in one large ward where the beds were placed in rows. There was but little distinction made between the nature and the seriousness of the illness. If a distinction was made, then this was between men and women. This was already the case in the Sint-Jan in Bruges at the beginning of the 13th century. Most institutions followed much later. In the Sint-Elisabeth in Antwerp, for example, this wasn't the case until 1510, with many hospitals to follow their example. *Notre-Dame à la Rose* in Lessines would follow as late as the 19th century. The number of beds, occupation and death rates during the Middle Ages are scarcely known. In the 15th century the Sint-Jan in Bruges counted a maximum of a few hundred beds. This was quite a lot, making it one of the largest institutions by the end of the 18th century. The Bijloke had some forty beds. *Notre-Dame à la Rose* acommodated fourteen to fifteen sick persons. Single and multiple beds were in use. The sick were given a single bed whenever possible. But demand often exceeded the offer. Thus, during the war at the end of the 15th century, it was not uncommon in de Bijloke for people to end up with two or three in a single bed. What and how much the sick were given to eat cannot be determined. The importance of specially adjusted meals and drinks was however emphasized in the statutes. The desires of the sick had to be met within the possibilities.

There was no physician present during an admission. If someone was very sick or suffered from an exceptional Illness, which required the attention of a physician, he had to pay for it himself. If he did not have the resources for this, then the hospital would possibly

contribute to the costs, this is, for example, mentioned in the statutes of the hospitals in Bruges, Brussels, Alost, Grammont and Ninove. Medical care was, in other words, not inherent to a stay in a hospital. Physicians with a university degree were seldom seen in the 15th century, which slightly improved somewhat in the 16th century. The establishment of the university of Louvain largely attributed to this. Chirurgeons or healers were on the other hand active at a much earlier time. In the large institutions they were listed together with the barber on the wages list. This was the case from 1280 in the Sint-Jan in Bruges, and at last in the Bijloke at the beginning of the 14th century. A known surgeon is Jan Yperman, who was active in the Belle hospital in Ypres. Everything purely intellectual that did not involve manual gestures, was the work of the physician. Administering treatment was the work of the chirurgeon or healer, who performed all acts involving instruments or concerning external treatment: setting fractures, healing swellings, treating open wounds, amputating arms and feet. Shaving, hair cutting, bloodletting and pulling teeth, was done by the barber. From the 15th century on he passes on his medical tasks to the chirurgeon. Bloodletting was applied for both preventive as well as curative purposes, and this for nigh all ailments. It was thought that the necessary balance between the vital juices (*humores i.e. bodily fluids*) could be maintained or restored this manner. An imbalance was after all the source of all ailments. It was deemed possible to achieve the same objective with the application of enemas.

In the 15th century, medical care became more common. In 1359, in the Sint-Jan in Brussels a chirurgeon and his assistent were employed. Later on, in the 15th century they were even visited on a daily basis by the town's chirurgeons as well as by the town's physician, who visited once a week. In Herentals, a physician was paid to work in the hospital, which also employed a chirurgeon in 1414. The medical care for poor Ghent burghers in the Bijloke was paid for by the town magistrate. The institution had to pay for patients from outside of the town. It was only in the 16th century that there was called upon a physician. In small hospitals, like the one in Alost, the chirurgeon still visited the sick and the afflicted at the beginning of the 16th century. By the end of that century, this was included in the tasks of the town physician. But by the end of the 18th century there was still no permanently employed physician or chirurgeon in the hospital of Lessines. The wages of the medical personnel were either paid out by the hospital, or in some cases, by dipping into the town's funds. At times the personnel also helped attend to the sick and afflicted in the town, but this wasn't always the case. Hospital dispensaries first made their appearance in the 17th century. Before that, medicines were obtained from local herbalists and/or apothecaries in cases where the private herb garden did not produce the necessary.

▲ Ward (15th century) in the Sint Elisabeth hospital in Antwerp (photo Ludo Boeij © OCMW Antwerp)

THE HOSPITAL PERSONNEL

The daily management of both the sick as well as the property was carried out by both men and woman, ususally called brothers and sisters. When hospitals further developed and in order to ensure the continuity of the initiatives, a form of organization was called for. The statutes adopted at the end of the 12th century, were the work of local authorities, both urban and ecclesiastical. These became more numerous as a result of the Councils of Paris in 1212 and, two years later, that of Rouen. The enactment of statutes for the hospitals and leper houses, which were large enough to be served by a community, became obligated. Several principles of a general nature required to be included: making three vows, wearing the clerical habit and limiting the number of staff members. There was also a reaction against the wide custom to accept healthy people who traded goods in exchange for food and lodging, the so-called food buyers.
Many hospital communities followed the cloister

rule of St. Augustine. This should however not lead to the impression that they all belonged to the same order and the same congregation, subject to a father or mother superior. The principles of the so-called rule of Saint Augustine are so general that they could be observed by each community. This rule allowed the many obligations and tasks of hospital personnel to be fulfilled, which would otherwise not have been possible with a strict cloister rule. When in 1215 the fourth Council of the Lateran forbade new cloister orders and imposed the obligation to follow the existing order and a proven cloister rule, this rule made possible to fulfill this without having to join a real order. That a hospital was entrusted to Cistercian sisters, such as in the Bijloke in Ghent, was most exceptional.

The statutes, drawn up at the time of Walter van Marvis, bishop of Doornik and countess Johanna of Flanders and Hainaut, expressed a strong Dominican inspiration. Thus the statutes of the Comtesse hospital in Lille (1244 -1246) were perhaps drawn up by the Dominicans of Lille. These were adopted by the hospitals in Seclin (1246), Komen (1250), Themolin-les- Orchies (1264). The influence of the Dominicans was also patent in the diocese of Cambrai. This is apparent from the near similar statutes of Geraardsbergen (1255), Aalst (1266) and Ninove (1268) and also for Edingen (1319) and Merchtem (14th century).
The statutes of the Sint-Jan in Bruges are considerably older and were drawn up in 1188. These were adopted in 1196 by the similarly named institute in Ghent. In 1268, the Onze-Lieve-Vrouw hospital of Ypres adopted this text. It treated regulations from the local authorities. At all other places these originated from the bishop or the chapel. Thus, Ypres appears to have intentionally adopted this urban and not the episcopal example, whilst inversely, the espiscopal statutes were not inspired by the older statutes of the Sint-Jan in Bruges.

▶ Cloister, chapel and ward of the hospital in Aalst (photo K. Vandevorst)

Roughly speaking, everything was directly connected to the sick and the work of the sisters. Under the supervision of a mistress, they provided for the internal organisation of the nursing service and the care, possibly assisted by service personnel. The more that the sisters cared for the sick themselves, the higher that the institution was thought of. The brothers were responsible for managing the premises and the relations with the outside world. They sooner or later disappeared from the hospitals. Their tasks were then taken over by the sisters, who were possibly assisted by a greeter. The execution of the tasks by the brothers and sisters was supervised by the guardians, also called *bestierders* and *regierders*, in Latin *tutores [tutors]* or *gubernatores [governors]*, in French *mambours* and *proviseurs*. They appeared during the course of the 13th century, there were usually two of them and they were required to keep an eye on the interests of their guardian institute. Special points of attention were the supervision over the financial policy and the employment of personnel. They were designated and represented the supreme guardianship or supreme authority (*souverains mambours*). If they were not a member of the town magistrates, then they came from prominent families. Other types of management were rare. A totally different management style could be found in Hoei. There ,the committee of *11 hommes [men]*, composed of representatives from each of the skilled trades, together with the town council, supervised and kept a watchful eye on all charitable institutions.

THE HOSPITAL ARCHITECTURE

The medieval wards, specifically constructed with this purpose in mind, took the layout and form of halls. It usually concerned an east-west oriented hall with a long rectangular groundplan and large dimensions. Sometimes, like in the Sint-Jans hospital in Bruges, there were several parallel halls, each with their own eastern and western façades. They

◀ Interior of the chapel of thet Onze-Lieve-Vrouw hospital in Oudenaarde (photo K. Vandevorst)

consist of a ground-floor hall and a garret floor. As to the origin, Germanic housebuilding is often reffered to, which developed further into the medieval town dwelling. The right-angled floor plan with the small sides on the street side is adapted to the distribution of ground lots in the old towns. The first infirmaries at the cloisters have similar large rectangular areas, whilst hall types are found in business premises at cloisters, such as the shed of Ter Doest in Lissewege. Then again, other authors stress that creating areas where the bedridden, especially the dying, could participate in the religious rites, lay at the basis for this type of construction. One of the purposes of a medieval hospital was to take care of the wellbeing of the soul and prepare for death, maybe even more so than to restore people's health. This explains the unity of chapel or altar and ward, and the reason for the large dimensions, which was also in keeping with the Gothic concepts of space. Those high spaces also resolved the problem of ventilation, one of the few hygienic problems that were actually taken into account. The large and normally high windows could, after all, not be opened. In the cloister infirmary of Ourscamp a solution was found for this with the introduction of a double row of windows, of which the lower, smaller windows could be opened on ground level. The hospital at Tonnerre solved this problem through a gallery, which, beside an overview of the sick, also made it possible to open the windows. However, opening the windows usually remained problematic, which explains the limited number of beds in these large areas. When a separate chapel or church was built, this was done so parallelly to the ward through which a regular pattern of the beams was repeated, such as in the Bijloke in Ghent and

◀ Chapel of the Sint-Elisabeth hospital in Antwerp, of which the oldest parts date back to 1400 (photo K. Vandevorst)

the Potterie in Bruges. But even then, an altar was still present within the wards.

The ward, often accompanied by a church, was the most impressive building. A hospital complex consisted of several buildings, built out of the necessity to accommodate the brothers and sisters, the service personnel and priest. Also the sections for kitchens, bakery, brewery, stirage areas and sheds were housed in these buildings.

The proximity of a watercourse was imperative for medieval hospitals. This simplified the supply and discharge of water that had been used and the water from the toilets. Sometimes there was a

▶ The chapel for the sick of the Sint-Jans hospital in Bruges, renovated as a museum (© Hugo Maertens)

▼ Front of chapel and ward of the Bijloke hospital in Ghent (photo K. Vandevorst)

channel, which functioned as a sewer, which ran under the buildings. Providing safe crossing over a dangerous watercourse, for example, via a bridge, which frequently occurred in the Rhône Valley, was, in our regions, seldom seen as a basis for establishing a hospital. An exception to this was perhaps the Grand Hôpital in Namur, later called the Saint-Gilles.

BIBLIOGRAPHY

Bijdragen in *Annalen van de Belgische Vereniging voor Hospitaalgeschiedenis* I-XXVIII, 1963-1993; DEBRUYN R. (red.), *Hôpital Notre Dame à la Rose*, Lessines, 2003; *Een hart voor mensen. 300 jaar hospitaalzusters te Aalst.*, Aalst, 1986; ELAUT L., *Het leven in de Gentse ziekenhuizen vanaf hun ontstaan tot op heden*, Gent, 1976; JETTER D., *Das europäische Hospital von der Spätantike bis 1800*, Keulen, 1986; LACROIX M.-Th., *L'hôpital Saint-Nicolas du Bruille (Saint-André) à Tournai de sa fondation à sa mutation en cloître 1230-1611* (*Public. de l'Institut d'études médiévales*, 2e série, 1), Louvain-La-Neuve, 1977; MARÉCHAL G., *Motieven achter het ontstaan en de evolutie van de stedelike hospitalen in de XIIde en XIIIde eeuw*, in *Bijdragen tot de geschiedenis van de liefdadigheidsinstellingen te Ieper*, Ieper, 1976, p. 11-34; ID., *De sociale en politieke gebondenheid van het Brugse hospitaalwezen in de Middeleeuwen* (*Standen en Landen*, LXXIII), Kortrijk-Heule, 1978; ID., *Armen en ziekenzorg in de Zuidelijke Nederlanden*, in *Algemene Geschiedenis der Nederlanden*, II, Haarlem, 1982, p. 268-280, 514 en 547-548; MILIS L., *Kerkelijk en godsdienstig leven circa 1070-1384*, in *Algemene Geschiedenis der Nederlanden*, III, Haarlem, 1982, p. 165-211; MOLLAT M., *Les pauvres au Moyen Age*, Paris, 1978; MUS O., *Rijkdom en armoede. Zeven eeuwen leven en werken te Ieper*, in *Prisma van de Geschiedenis van Ieper*, Ieper, 1974, p. 1-27; PLATELLE H., *La vie religieuse*, in TRENARD L. (dir.), *Histoire de Lille*, Rijsel, 1970; *Sint-Janshospitaal Bruges 1188-1976*, Bruges, 1976; VAN DER MADE R., *Le Grand Hôpital de Huy. Organisation et fonctionnement (1263-1795)* (*Standen en Landen*, XX), Leuven-Parijs, 1960; *750 jaar gasthuis op 't Elzenveld 1238-1988. Het St.-Elizabethziekenhuis te Antwerp*, Antwerp, 1988.

▲ Saint Lucas and Saint Stefanus on a mural (end of the 15th century) in the chapel of the Elisabeth hospital in Antwerp: Lucas was a healer in Antioch and patron saint of doctors; Stefanus holding the stones, was invoked for kidney stones, boils and headaches (photo O. Pauwels)

Thomas Coomans

THE MEDIEVAL CLOISTER INFIRMARY: AN OVERVIEW OF SPIRITUAL, MEDICAL AND PRACTICAL CONSIDERATIONS

Eastern wall of the infirmary of Villers (© THOC)

An abbey in the high Middle Ages was not only a well-organised world, but was also concerned with all the members of its community, including the sick. It is however especially a religious environment, in which both the sick as well as the care of the sick imparts a deep spiritual meaning. Around 550, Saint Benedict consecrates the 36th chapter of his Rule, the basis of the cloister tradition, to the sick brothers. He defines the spiritual dimension of the relation between those who are ill and those who care for them: "*For all and above all one will dedicate care to the sick, so that they are truly personified in Christ... The sick, from their side, are likewise required to understand, that they are served in honour of God*". It also holds several practical recommendations, notably regarding accommodation and food. A fundamental source for the history of cloister infirmaries is the Plan of Sankt-Gallen from around 825, produced in the context of the Carolingian reformation of cloisters. This theoretical design determines the different functions of an abbey and proposes an ideal layout of an infirmary. Situated near a small cloister building to the east of the abbey church are, the wings of the dormitories of the sick, a room for contagious diseases, a chapel, a refectory and a room for the master. The toilets are accessible from the dormitories. Nearby there are three separate buildings, the kitchen and the baths, the room for bloodletting, the physician's room and the room for the seriously ill.

In the vicinity there is a garden with medicinal herbs. The somewhat separate location of the infirmary to the east of the other buildings, in proximity of the noviciate and the graveyard, is significant. The presence of baths and a kitchen accords to the recommendations of the Rule.

THE ORGANISATION OF THE INFIRMARY AND THE MEDICAL KNOWLEDGE

The infirmary or *fermerie* in the abbey forms a separate whole, where the monks were housed who could no longer observe the physical and spiritual rigour of the cloister community. There are three significant reasons for the monks to stay in the infirmary: old age, illness or an accident, and bloodletting (*minutio*). For some monks, this only meant a couple of days, until they had recovered, whilst others remained there for the rest of their lives. This does not mean that the infirmary was a 'place of banishment': staying in the infirmary was not a form of punishment and the sick remained part of the community. On the other hand, the infirmary cannot be considered a place of comfort and relaxation.

The medical knowledge, based on Hippocrates and Galenus, is the same in monastic and urban midsts in the 12th and 13th century: the medical treatment was brief and inefficient. The help from God was found to be more important than the assistance of a physician or an infirmarian! The cloister regulations, such as the *Ecclesiastica officia* for the Cistercians from the 12th century, do not mention, any other medical treatments, besides adapted victuals and bloodletting. Bloodletting, which was common in the Middle Ages, is almost accorded a liturgical dimension in the abbeys. According to a meticulous ritual, each monk was required to undergo a bloodletting four times each year in order to remove the 'superfluous blood' from his body. The abbot decided when a monk was required to be subjected to bloodletting and he also determined the amount of blood that was to be tapped. The role of the infirmarian (*infirmarius* or *fermerier*) was apparently limited to the material organisation of the hospital quarters and the disciplinary supervision within the infirmery.

Does the abbey call in lay physicians? Were the contagioned sick separated from the elderly? What was the level of medical knowledge of the monks and their practices in te Middle Ages? The large number of medical books in the libraries of the de Cistercians in the United Kingdom gave David Bell the impetus to decide that their interest in medicine should not be underestimated. The presence of the *fysicus* or *medicus,* in other words, lay physicians, as witnesses by the drawing up of charters in the British Cistercian abbeys – the sole research theme of this nature which was examined – shows that the Cistercians of the 13th century displayed an interest in the know-how of specialists from outside their environment. For the early Middle Ages, accounts of cloister infirmaries have been preserved, which with respect to this form very precise sources. For example, from the accounts of the Sint-Pietersabdij in Ghent which date from the 15th century, it appears that the abbey did not have an own dispensary and that prescriptions were written out by lay apothecaries. Archeological excavations of waste and cesspits returns important information as to the eating habits in the infirmaries. The combination of all this research such from a multidisciplinary approach is the only way to study the knowledge with respect to the medical practice during the Middle Ages.

The infirmary of the monks was nearly always located to the east of the abbey buildings, near to the graveyard at the chancel of the church, such which was already drawn on the plan of the Sankt-Gallen. This location within the clausura [cloister] is the result of spiritual, medical and practical considerations. The East stands as a symbol for the place where Christ resurrected, for the conquest of life over death, of the light in the darkness. This spiritual meaning determined the general orientation of the buildings: the East is the most sacred part of

▲ The chapel of the beguinage infirmary in Borgloon (photo C. Vanthillo)

▲
Infirmary of the Ter Duinen Abbey on the east side of the central building, on the painting (1580) by Pieter Pourbus (© Stedelijke musea Bruges)

the abbey, at which are located the church chancel, the chapter house and the graveyard.

Moreover, this attaching to a faith meets the healing strengths of a specific orientation, such as Hippocrates sets out in his treatise with respect to air, water and the localizations "*the heat and the cold are more moderate, the rising sun purifies and the water, directed to the rising sun, is clearer, sweeter and more appetizing. The people who stay at that side have a finer skin, a clearer voice and a good-humoured temperament. They are more intelligent and ill less often*".

WARDS AND CLOISTER INFIRMARIES IN THE 12TH AND 13TH CENTURY

The architectural type of the ward was established from the first half of the 12th century. All cloister infirmaries and urban hospitals adopted this type, this of course with diversity in size and structure. The infirmaries of the abbeys were thus not an isolated phenomenon. A number of preserved wards in Cistercian abbeys form part of the finest examples of the hospital typology, with their one or several beams and a wooden or stone archway:

Ourscamp in France, Aduard in the Netherlands, Eberbach in Germany and Fossanova in Italy. Most of the medieval infirmaries were however, from the 16th century, demolished, redesignated or radically changed. There were but few excavated except, that is, in Great Britain (Fountains, Rievaulx, Tintern, Beaulieu, Kirkstall, Furness and others).

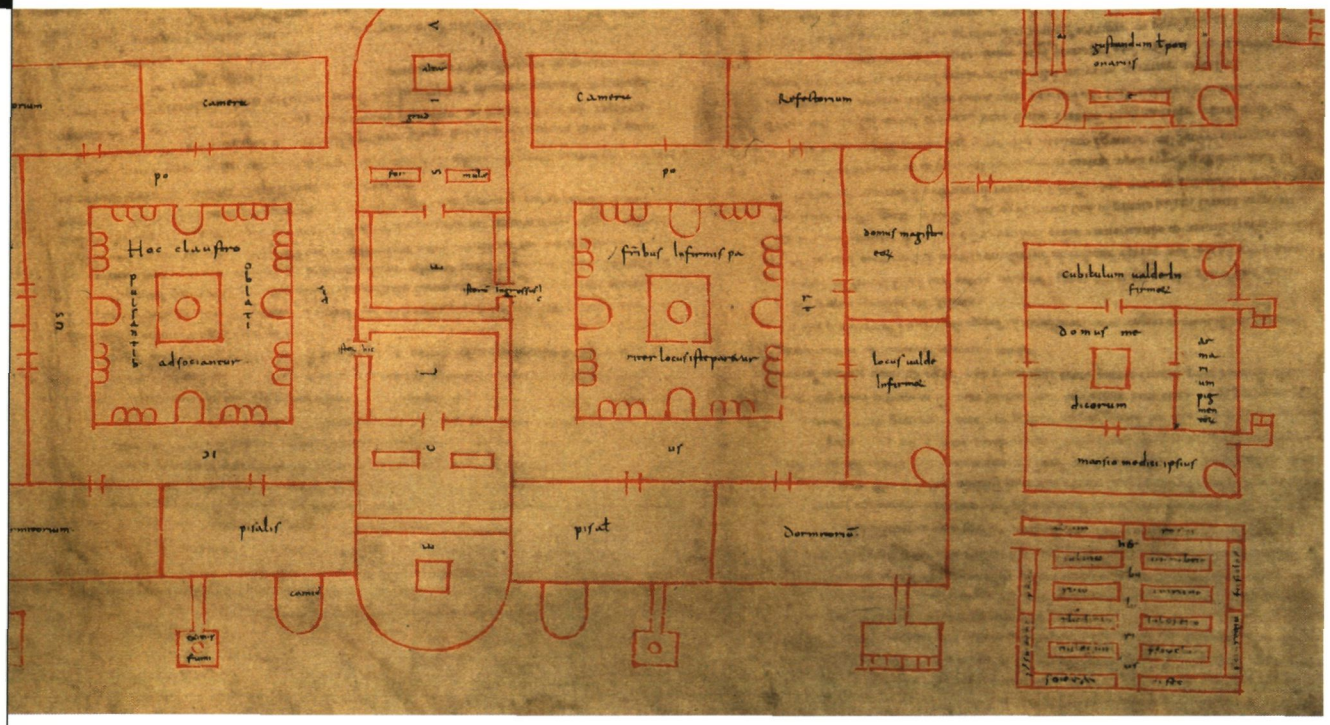
The singular ward of the Bijloke in Ghent (1251-1255) is not a cloister infirmary, but an urban hospital which was operated by Cistercians. For the remainder, little has been preserved from the Middle Ages in Belgium and the remains are difficult to interpret. We give the foundations of the various buildings and annexes which came to light during the excavations at the Sint-Pieters - abbey in Ghent (1972-1975), the abbey of Boudelo in Klein-Sinaai (1984) and the abbey of Ename (1990- 1991), and not to forget the vaulted cellars of the infirmary building of the abbey of Floreffe, as well as several walls of the abbey of Villers, both of the 13th century. This is uncommonly meagre as we know that there were hundreds of abbeys on the current territory of Belgium which all had one or more infirmaries within their walls. Of the infirmaries which were reconstructed during the New Age, those of the Cistercians of Herkenrode (1685) and of Roosendael (plague house, 17th century) were perhaps the most illustrative for the evolution of the monastic hospital typology of after the Middle Ages. In both cases there is no longer a communal, but that of individual rooms.

The orientation of the ward differs by each, as this was dependent on the local topography and especially that of the water supply, which was extremely important on account of the need for clean water. Although the infirmary is situated somewhat apart, it is not isolated. Excavations and iconographic sources evince that the ward was often connected via a gallery to the other cloister buildings. There is sometimes even an entire cloister building between the building of the monks and the infirmary. There is then that of a *klein pand [small building]* or an *infirmeriepand [infirmary building]*, such as depicted on the painting of the Ter Duinen Abbey (1580), and as was excavated at Ename.

As architectural principle, a ward was required to have a large volume of fresh air, required to be easily ventilated and with a large ingress of light.
In contrast to the formitories, the infirmaries were occupied throughout the day and had a more sacral character. On the one hand, fresh air and ventilation formed the basis of medieval medicine such based on Hippocrates and Galenus. On the other hand, the light that flooded in via the windows in the form of church windows, symbolised the light of Christ in his ressurected body. John Thompson and Grace Golding analysed the remarkable system of the infirmary windows of Ourscamp: "*the rose windows and the tall lancet windows thereunder could not open and serve to illuminate a large vaulted hall such as a church building, whilst the three smaller lower windows, which are at a man's height, can be opened and allow to be ventilated. These 'sacred' and 'profane' windows represent the double function of a ward. The sick are firstly and especially human beings: they eat and defecate, they are wrapped in bandages, they vomit and scream due to pain, but at the same time, they are potential candidates for salvation, on the road to paradise*". These high windows must have been a heavenly sight to the sick in their beds. The pointed arch windows of the infirmary of Villers (mid 13th century) are simpler: they do not have an upper level and combine illumination with ventilation.

In the brickwork between each window there is a recess with small glazed tiles and a wooden tablet at half-height. There was a suchlike niche at each bed. As was the case for the urban hospitals, the cloister infirmaries also had an oriented chapel,that is, in the extension of the ward, or separate from this. The services in the chapel were only intended for the bedridden patients, since the still mobile sick had to proceed to the chancel for the sick of the church. In the chapels of cloister infirmaries there were apparently no burials. All the members of the community, both the monks as well as the lay brothers, with the exception of the abbots, were buried at the graveyard.

As far as the annexes were concerned, the regulations indicate the providing of a surgery, tables for the meals, a hearth, a kitchen, and even a refectory, baths and a room for the dying, this all separate from the ward. Complete excavations of several infirmaries in British abbeys have borne out the presence of a number of annexes. The toilets and the kitchens can, on account of the underground sewerage system, be easily localised. One can only hazard a guess as to the purpose of the other annexes. Although the suppositions made with respect to this are interesting, they remain hypotheses (nurses quarters, refectory, storage areas). The regulations make no mention of a medical herb garden which should have been situated adjacent to the infirma-



▲ The infirmary complex around a courtyard on the Plan of Sankt-Gallen, around 825 (© Stift St. Gallen)

ry. The responsibility that this was entrusted to a specific monk is also not evident from the regulations. The current gardens at some abbey sites, such as, for example, at Orval, are reconstructions. There were still other infirmaries within the abbey walls, but this subject has barely been studied. Written records and the remains of buildings are very scarce. Insofar that the small number of British examples allow us to corroborate this, the location of the infirmary for the lay brothers in Cistercian abbys appears to be systematic at around the end of the 12th century. In Villers, the infirmary of the lay brothers consisted of two beams with six bays, which were probably vaulted. Parallel to the dormitory of the lay brothers, the infirmary was connected to this by a toilet building, which was build directly over the river. In the 15th century converted to an abbot's house – there were at that time no lay brothers – the entire structure was demolished at the beginning of the 18th century.

Additional to the infirmary, reserved for the monks and the lay brothers of the cloister community, there was an infirmary for the lay and the poor, but there is still less known about this. Only archive sources concerning gifts or charitable institutions confirm the existence thereof. There was certainly one in Villers in 1270. Moreover, a text from the beginning of the 14th century mentions a chapel where a daily mass was read for the secular sick and a Sunday mass for the abbey personnel. That infirmary was probably located in the vicinity of the guest quarters or the gatehouse.

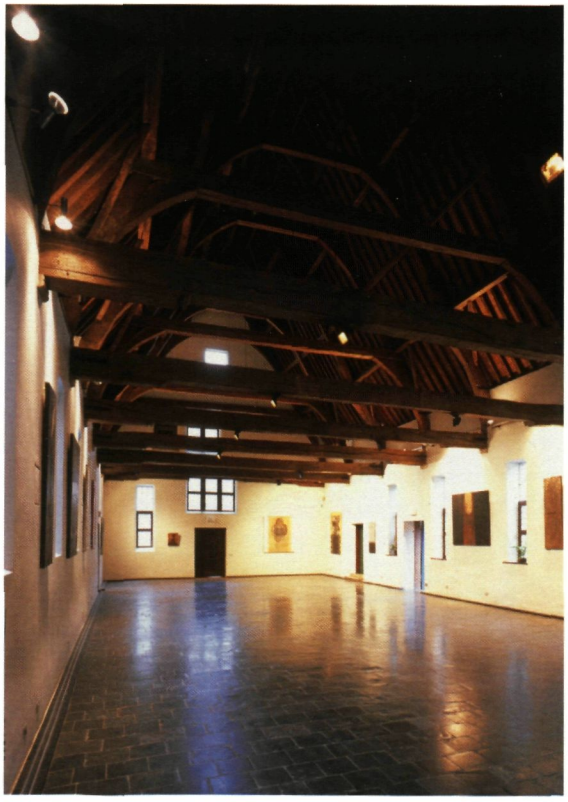
THE DIVISION FROM LARGE HALLS INTO CELLS IN THE 14TH AND 15TH CENTTURY

From the end of the 13th century one observes a new social phenomenon, namely that of a general desire for more privacy. The reasons for this evolution are both social as well as epidemiological. In an abbey this was especially due to a desire for individualisation and more intimacy within the cloister community. This did not remain limited to the ward, because also the dormitories in cloisters were divided up, whilst the abbots built personal accommodation for themselves outside of the cloister walls.

It is especially excavations in Great Britain, which clarify to us as to how and when the infirmaries were divided up in the abbeys. The structure itself of these halls allowed for such a division. Separate rooms were formed through dividing the modules of each bay at their sides with walls or partitions, whilst the central nave remained free for the services and the other communal activities. Sometimes the presence of stairs pointed out that certain large

halls were also divided into two upper levels. The rooms are equiped with open fireplaces and sometimes individual toilets. Peter Fergusson and Stuart Harrison see his evolution as to being one of more comfort and privacy in a smart combined formula: "*the evolution from hall to house*", which at the same time expresses the evolution of the architecture and that of medical care. This is the case in an abbey of the 14th century such in an individuial and homelike scale and will begin to form part of the new types of cloister spirituality, which is more inward oriented and based on work, study and personal devotion. This evolution did not proceed without difficulties and was at an initial phase rejected by the religious authorities.

▼
Infirmary of the Groot Begijnhof in Louvain (photo K. Vandevorst)



The excavation of the infirmary at Villers established that same evolution. The oldest parts of the building – relieving arches and buttresses, small lancet windows interspersed with wall cabinets – are very fragmented. These are however sufficient to understand their appearance and to date these to the second quarter of the 13th century. The chronicle of Villers mentions that, around 1300, an upper hall was laid out, with rooms for the sick underneath (*aula superior et sub ea camere infirmantium*). Through dividing the large ward into two levels with individual rooms at ground floor level, Villers fits perfectly the trend of the evolution of the hospitals and the abbeys in the 14th century.

The *fermerie* of the Duinenabdij is depicted on the view of the abbey from a bird's eye view, painted by Pieter Pourbus in 1580. The legend explicitly mentions the chapel as well as the sick and the elderly: "*16. Daer naer de fermerie die lanck is 154 voeten van binnen de meuren. En de wijde van deze is 356 voeten seer schoone met een torre en diergelijck cieraet van binnen met een koor daer in met een altaer. Ende dobbel gestoelte ende een afsluijtsel over beijde de zijden van 't een eijnde tot 't ander eijnde al camers voor de siecken ende ouderlijngen*". The site of the infirmary and the small cloister building (*cleene pand*) to the east of the cloister buildings has not yet been archeologically examined.

INFIRMARIES OF BEGUINAGES

In the medieval town most male and female cloisters had an infirmary, which was limited to one or two rooms by small communities. The beguinages with their large populations of sometimes several hundred women, were confronted on another scale by the elderly and the sick. Also needy lay women were admitted to the infirmary of a beguinage, which was conducted by a superior who kept specific accounts and designated the physician arts or chirurgeons. The begiunage infirmarians or *firmarijsusteren [infirmary sisters]* were connected to the infirmary, whilst other beguines [lay sisters] helped out in the town's houses of God or cared for people in their homes.

Except for a chapel in Borgloon, no medieval beguinage infirmary has been preserved, but there are nevertheless several interesting examples from the second half of the 16th century (Louvain, Tienen and Diest), from the 17th century (Tongeren, Turnhout, Dendermonde and Ghent: Groot en Klein

Begijnhof [Large and Small Beguinage]) and from the 18th century (Lier and Sint-Truiden). These infirmaries probably replaced the medieval infirmaries at the same place and they are usually situated in the vicinity of the church and the graveyard.
The infirmary of the Groot Begijnhof in Leuven deserves special attention because of the results of the excavations in 1965-1966 and the archive research. The infirmary, located opposite the church, had a large ward or *beyaert* with a chapel with a polygonal apse, dedicated to Saint Catharine and consecrated in 1294. There were no fireplaces in the hall, but these were heated by braziers of which the pits were found in the soil. The accommodation of the beguine infirmarians was attached to the hall, an enclosed garden or *susterhof [lit. sisters yard]*, a kitchen and duty rooms. These probable artisan buildings were around 1545-1546 reconstructed in brick, accordant to a similar plan.

The new ward was divided into thirteen alcoves with a central corridor and had several floors. By the restoration, the area and the wooden roof structure freed up to give the impression of a large hall, now used as a restaurant.
Through their partly religious, partly secular character, the infirmaries of beguinages follow the typology of the town hospitals. This is often accompanied by a shelter for the poor, known as the Heilig-Geesttafel.

CONCLUSION

More than other social groups in the Middle Ages, the monks treated the sick from their community with much benevolence. The large cloister infirmaries, which mainly date from the 13th century, bear tangible witness to this. The exceptional dimensions of some of these vaulted halls can only be appreciated because their sacred character approaches that of a church. Just as the two other buildings which dominate an abbey, the church and the refectory, the cloister infirmary has likewise a figurative meaning. Whilst the church celebrates the offer of Christ and the refectory adverts to the last meal, the infirmary represents the vague border between the material world and that of eternity. The infirmary is the place for the final transitions to the heavenly Jerusalem of which the abbey already desires to be an earthly anterior reflection. Saint Benedict clearly formulated this in the preamble of his Rule: "*Let us thus never shirk from Gods direction, but persevere in his doctrine to the death in the cloister, to through our patience participate in Christs' suffering, and thus earn to become sharers in his kingdom*".

More so than in whatever other area, the sick monk could in the infirmary participate in the suffering of the crucified Christ (including through the bloodlettings). In the infirmary the monk of this earthly life transits to the hereafter, and that according to a ritual that leaves no doubt as to the meaning of the place. When a sick person was on the threshold of dying, the infirmarian placed him on the floor, on a large sheet or on ash in the form of a cross. He then convoked the community through ringing a bell

◄
Aerial photo of the archeological site of Ename, with infirmary In the middle at the bottom: the oblong building in two parts, under the small inner yard with a well (© VIOE)

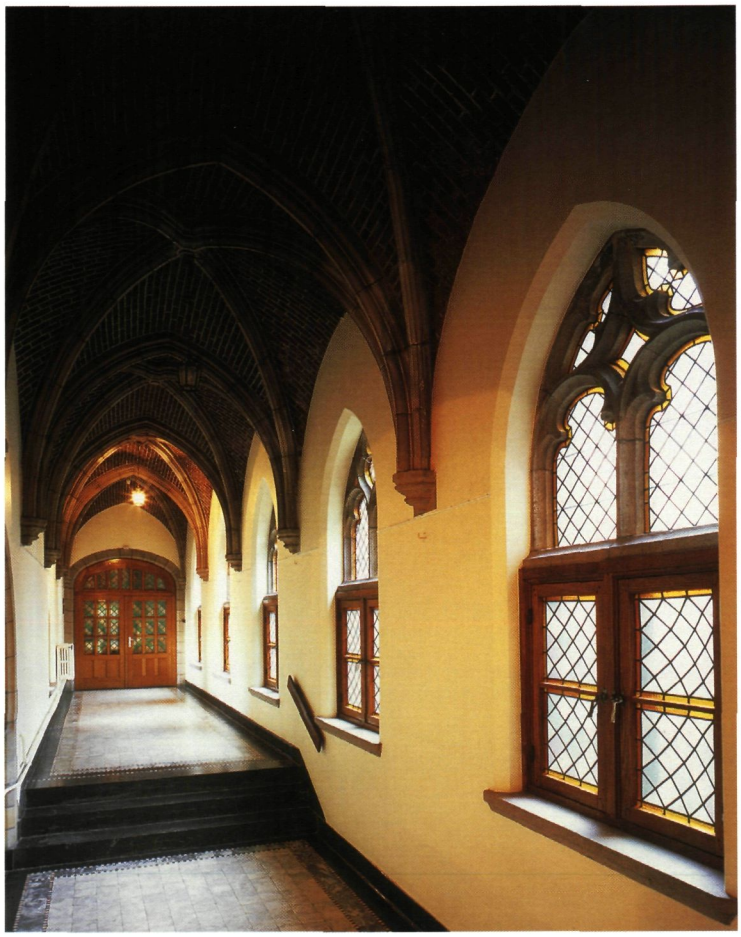
four times. The brothers would then immediately come to the infirmary to assist the dying person through their presence and their prayers. It will be evident that in the eyes of the medieval monk God, who is the Alpha and the Omega, is the only real physician.

BIBLIOGRAPHY

BELL D.N., *The English Cistercians and the Practice of Medicine*, in *Cîteaux Commentarii Cistercienses*, 40, 1989, p. 139-174; ID., *The Siting and Size of Cistercian Infirmaries in England and Wales*, in LILLICH M. (ed.), *Studies in Cistercian Art and Architecture*, 5 (*Cistercian Studies Series*, 167), Kalamazoo, 1998, p. 211-237; BAILLEUL B., LALEMAN M.C. e.a., *De Sint-Pietersabdij te Gent. Historisch en archeologisch onderzocht* (*Archeologische monografie*, 1), Gent, 1979; CASSIDY-WELCH M., *Monastic Spaces and Their Meanings. Thirteenth-Century English Cistercian Monasteries (Medieval Church Studies*, 1), Turnhout, 2001, p. 133-165; CHOISSELET D. en VERNET P., *Les 'Ecclesiastica officia' cisterciens du XII^e siècle, (La Documentation Cistercienne*, 22), Reiningue, 1989, cap.92 (*de infirmis qui sunt in infirmitorio*) et 116 (*de infirmario*); COOMANS Th., *L'abbaye de Villers-en-Brabant: construction, configuration et signification d'une abbaye cistercienne gothique (Studia et Documenta*, 11), Brussel-Brecht, 2000, p. 411-428 en 431- 448; ID., *De la salle commune à la chambre individuelle: l'évolution des infirmeries monastiques (XII^e-XV^e siècles)*, in *Archaeologia Mediaevalis 25 ans*, actes du colloque (*Études et Documents, série Fouilles*), Namen, Division du patrimoine, 2005 (in voorbereiding); CRAEMER U., *Das Hospital als Bautyp des Mittelalters*, Keulen, 1963; DE BACKER M., *Farmacie te Gent in de late middeleeuwen. Apothekers en receptuur*, Hilversum, 1990, p. 79; DEVLIEGHER L., *De Duinenabdij te Koksijde. Ikonografie en Archeologie*, in *Biekorf. Westvlaams archief voor geschiedenis, oudheidkunde en folklore*, 61, 1960, p. 193-228 (in het bijzonder p. 224-225); DIMIER A., *Infirmeries cisterciennes*, in CHAUVIN B. (ed.), *Mélanges à la mémoire du père Anselme Dimier*, 2, Arbois, 1982, p. 804-825; FERGUSSON P. en HARRISON S., *Rievaulx Abbey: Community, Architecture, Memory*, Londen/New Haven, 1999, p. 131- 132; GILLET-MIGNOT P. en WARZÉE G. (ed.), *L'ancienne abbaye de Floreffe, 1121-1996 (Études et Documents, série Monuments et Sites*, 2), Namen, 1996, p. 146-153; HORN W. en BORN E., *The Plan of St Gall. A Study of the Architecture & Economy of, & Life in Paradigmatic Carolingian Monastery*, 3 vol., Berkeley/Los Angeles/Londen, 1979, p. 313-321; LALEMAN M.C., RAVESCHOT P. en VAN DE WALLE R. (ed.), *De Sint-Pietersabdij te Gent. Het rijke leven van zieke monniken. Twee afvalputten uit de infirmerie 1600-1780 (Archeologische monografie*, 2), Gent, 1985; LEMAIRE R.M., GENICOT L.F., VAN THIENEN R. en MATTHYS A., *L'infirmerie du Grand Béguinage de Louvain*, in *Bulletin de la Commission royale des Monuments et Sites*, 16, 1965-1966, p. 7-178; sCHMITZ Ph. (ed.), *Règle de saint Benoît. Texte latin, traduction et concordance*, 5^e éd., Turnhout, 1987, cap. 36 (*De infirmis fratribus*); SIMONS W., *Cities of Ladies: Beguine Communities in the Medieval Low Countries, 1200-1565*, Philadelphia, 2001; tHoMPson J. en Goldin G., *The Hospital: a Social and Architectural History*, New Haven/Londen, 1975.

Jaak Ockeley

HOSPITALS IN THE NEW AGE



▶ Walkway of the cloister wingl (1661) of the Onze-Lieve Vrouwhospital in Geraardsbergen (photo K. Vandevorst)

In order to in the New Age assuage the afflictions of the needy, there were at that time various institutions. The Heilig-Geesttafel, which was parochially organised, met the needs of the poor through distribution of material goods or support through money. The deranged were accommodated by private indivuals in Geel, but also in specific institutions. These were often the Alexians and in Velzeke the penitent sisters, who took care of the mentally ill. For elders there were numerous houses of God in the towns and also in the large villages. These were often small institutions with no more than twenty beds. Pilgrims and travellers without means, whose number had significantly dwindled during the New Age, were usually served by lay personnel and sometimes also by hospital sisters. Where hospices still existed, they often had a bad name and the authorities consigned them to places where vagabonds and layabouts lurked.

Furthermore, there were also leprosaria, where those with a contagious disease were sheltered, but since this type of illness recurred less frequently during this period, the nurses there simply lived

on the donated goods. Finally there were the hospitals – in Flanders usually called hospitals, such as the Sint-Janshospital in Bruges, and in Brabant hospitals, such as the Sint-Jans hospital in Brussels – where those who were poor and sick were cared for by hospital sisters or grey sisters. These hospitals were in many respects similar to their medieval predecessors. They were usually located in the towns, on rare occasions, they could also be found in the countryside. They were situated on the main street, often near the town gate.

Where in the Middle Ages the infirmary formed one whole with the prayer area so that the patients could attend mass from their beds, these were, in the New Age, separated by a wall or an adjacent hospital chapel. There were still wall openings present, so that the sick could at least hear the mass being read. Insofar that this can still be examined, there were no substantial innovations in hospital construction during the New Age.

◀ Infirmary of the sisters in the Notre-Dame à la Rose hospital in Lessines (photo G. Focant © MRW)

The larger buildings of a hospital, especially when kept by cloister sisters, were very similar to those of a cloister. One area was designated for the sisters: chapel and cloister building with chapter house hall, kitchen and refectory, infirmary of the sisters and the rooms of the superior. In addition there were a guest quarters with a ward, a dispensary with an accompanying herb garden, a linen room, a laundry room and the agricultural section – a hospital had to see to its own needs as much as possible – with shed, stables, carriage house and adjacent service buildings.

A hospital like the *hôpital Saint-Louis* in Paris, which was built in 1607 by architect Claude Vellefraux and which was seen as an example up to the 19th century, cannot be found in these parts. Nor religious riots, nor destruction by the armies of Louis XIV, nor fire or flood, were a reason to completely raze the medieval hospitals to the ground and to replace them by a hospital built accordant to new insights. Buildings were adapted, expanded, torn down or renovated.

DISQUETING CONDITIONS

An examination as to the conditions of the hospitals in the second half of the 18th century evinced the deplorable conditions under which the sick were accommodated. The Sint-Jansgast hospital in Brussels is a prime example of this. The buildings which, after the shelling in 1695 by Field Marshal de Villeroy, were rebuilt at their same location, no longer satisfied the needs. Alderman Simon François de Valeriola underlined this alarming situation in 1776: the number of sick constantly exceeded the number of beds through which the sick had to nearly always be bedded with two and sometimes three persons in one bed or, whilst awaiting their admission, had to spend the night outdoors or be prematurely discharged. In the ward the head of the one bed was placed against the foot of the next bed through which the sick could only be washed and cared for with great difficulty. Due to the large number of doors and the too high an inner area, it was freezing in the winter. The sick had too little rest from the busy traffic in the Gasthuis- en Violettenstraat and through the frequent entry and exit of patients and visitors. All surgical operations, excepting the amputations, occurred in the same ward. The site was situated in the town centre, was much too small, did not allow for expansion and could not, if a contagious disease swept the town, be isolated; the natural drainage was, for that matter, also inadequate. It was not any better elsewhere in the Southern Netherlands.

Plans were however made to build a new hospital, but the Brabant revolution, followed by the French occupation, was most probably the reason that these were not implemented. Also the attempt by emperor Joseph II to, such as in Vienna, in the important cities of the Southern Netherlands, build a general hospital with next to the hospital a department for women in childbed, for orphans, for invalids, for the mentally ill and for other outcasts, came to nothing.

THE WARD

It was only in but a few hospitals that there were two wards, one for men and one for women. In most of them there was however only one communal *beyaert* or ware for the poor sick. In contrast, the paying sick were customarily bedded in a separate sick room. There was often also a dying room in which the incurable were accommodated, whilst awaiting their passing. The large hall of the Sint-Jan in Brussels was 49 metres long and 25 metres broad and was thus somewhat similar to that of the Sint-Jans hospital in Bruges of which a painting by Jan Beerblock from 1778 gives us a view of the inner layout. The ward was smaller in the other hospitals: in Aalst, for example, the women's ward was 8 metres by 29 metres and the men's ward 10 metres by 18 metres; in Mechelen the *beyaert* was 12.5 metres broad and 24 metres in length. Many beds could thus not be placed in these all too small wards

▼ View of the old wards in the Sint Jans hospital in a painting (1778) by Jan Beerblock (© Stedelijke musea Bruges)



and since there was only one hospital per town, the need for a bed was high. The layout of these wards was, to say the least, precarious. On a painting by Karel van der Sluyse of around 1790 one can see how in the Sint-Pieters hospital in Leuven the carriage beds were set up lengthwise against the walls. According to a regulation from the middle of the 18th century, the beds had to be marked there with the "*letteren van A B C D ettca. ende dan voorts metten dobbelen AA BB CC DD oft deur getallen van 1, 2, 3, 4 enz*" and this to prevent that the wrong medicines were administered to the wrong patient. Examples of a suchlike layout can still be found in the *Hôtel-Dieu* in Beaune, in the Sint-Pieter and Blokland hospital in Amersfoort, on a painting by Jan Beerblock in the Sint-Jans hospital in Bruges and on a trapezium-shaped painting in the Centraal Museum in Utrecht with a depiction of the ward in the Sint-Catharijnen hospital in 1635. When the breadth of the hall permitted, such as can be seen on the drawing of the large ward in the Onze-Lieve-Vrouwe hospital in Mechelen by Jan Baptist de Noter, there was possibly also a double middle row placed. When there was only one ward, the men were separated from the women by a curtain or a wooden partition. Badly ventilated toilets and the overcrowding of patients sometimes caused a 'pestiferous' stench. The bed consisted of a bedstead, a matress filled with straw, a pair of sheets, a bolster, pillow and a couple of woolen blankets. The four-poster beds were draped with curtains at the front and open at the top.

OCCUPANCY CAPACITY

In the Southern Netherlands the average occupancy capacity was one and a half beds per 1000 citizens. This was often insufficient for the needs, so that it frequently occurred that two, exceptionally even three, patients had to be bedded in one bed. Obviously, this occupancy capacity differed from town to town. A couple of examples will illustrate this. In 1784, The Sint-Elisabeth hospital in Antwerp counted a total of 106 beds: 81 for the poor sick and 25 for paying patients, which allowed for the admission of 187 sick persons. This means that there was one bed on hand for 260 residents or 3.84 per 1000 residents. The Sint-Jans hospital in Bruges had 112 beds where the sick were at no time subjected to a two in one bed arrangement, which comes down to 1/275 (or 1/137 when one would nevertheless bed two in one bed). In the Sint-Jan in Brussels one counted in 1776 only 77 beds for approximately 70,000 residents, this is 1.1 per 1000 residents. The need there was great. The 'world traveller' Derival writes that in 1766 one of his correspondents saw that a poor sick woman laid herself down at around 22.30 hours at the hospital gate hoping to be admitted the following day. The sisters were often obligated to discharge persons who were only half curted in order to admit others who had a greater need.

◄ Little baroque door of the Onze-Lieve-Vrouwe hospital in Kortrijk (photo K. Vandevorst)

West wing of the Notre-Dame à la Rose hospital (17th century) in Lessines (photo G. Focant © MRW)

But in the New Age it appears that, for one, not everyone was admitted to hospitals and secondly, that one could not be treated there for all diseases. The prosperous usually had a preference for home care by black sisters, and avoided a hospital 'like the plague' on account of the danger of contagion. If we examine to which social groups the hospital patients belonged, then it appears to be mainly simple manual workers and the penniless poor, who desired to be admitted to a hospital. The number of beds that were available per 1000 residents would thus in actuality be higher than the above-mentioned numbers which are based on the total population. The number of persons supported by the poor table is in 1755 estimated for the whole of Brabant at 25 to 35%. The number of beds per 1000 residents can thus be multiplied by three or four.

In most of the hospitals too low an income was given as a reason to justify the small number of beds. In order to meet their own needs, hospital sisters in Diest, Mechelen and Leuven, just like the black sisters, started to help the sick in the towns and to place the bodies of prominent people on a bier. Moreover, the sisters claimed that there were too few healthy religious people to help admit and care for a large number, let alone, all of the sick. The situation in the Southern Netherlands was certainly not worse than elsewhere in Europe. Only in Brussels, and to a lesser degree in Ghent, the occupancy capacity was markedly low and one can speak of an acute shortage. The shortage of beds was predominantly due to a severe lack of space, rather than a shortage of financial means or the number of healthy sisters.

WHO IS ADMITTED TO THE HOSPITAL?

In order to be nursed in a so-called *beyaert* or communal dormitory of a hospital for the sick the patient would normally have to be needy and because of an illness no longer be able to beg from house-to-house. Furthermore, his ailment could not be of a permanent nature nor contagious and the statutes required that the sick person was a resident of the municipality or town in which the hospital was situated. Often those hospitals that claimed to only be available to residents, have in cases of emergency and often under coercion, also admitted foreigners, notably travellers and soldiers. It would be erroneous to assume that these sick persons had a distinct preference for a certain hospital on account of its renown for medical care or that it concerned im-

◀ Street side view of the Saint-Jacques hospital in Le Roeulx (photo G. Focant © MRW)

migrants or some master's service personnel. There are certainly those who can be classified under these last two categories. A second group, however, was made up of travellers of all sorts: animal drivers, pedlars, musicians, drifters, pilgrims, travellers who had gotten ill along the way and were now brought to the nearest hospital. It's very difficult to establish how many of these sick persons, born elsewhere, were just passing through or were, over time, settling in town.

It was also customary for abandoned children and pregnant women to be sent away. On the one hand the sisters claimed that admitting abandoned children was a task of the orphanage, on the other they claimed that assisting women in labor did not befit those of the cloth. In most hospitals future mothers were therefore mostly refused. This to prevent, the hospital from having to provide in the costs for the upbringing and the sustenance of the infant should the unmarried mother die giving birth. The St.-Jans hospital in Brussels, however, did admit pregnant women. According to the statutes of 1652, a sister was charged with the assistance of the *kinderbedt vrouwen [lit. childbed women]* in the maternity ward. It is highly unlikely that the sisters still performed this task in the 18th century. In 1759 the superior, sister Constantia Moreau, declared that they were not obliged to receive *grootgaende vrouwen ofte dochters [lit. pregnant women or daughters]*.

RESIDING IN THE HOSPITAL

The sick were normally collected from their homes in a carriage or sedan chair. On arrival they had to be reported to the superior or to the senior nursing sister, this in order to determine if the sick person was eligible for admission to the hospital. Subsequently, the sick person proved to be acceptable as a patient, his identity and place of residence recorded in the hospital register. Soon after his admission, the hospital priest had to be notified, so that he could hear the confession of the sick person. If someone refused, they could be rejected by the sisters. Albeit that, especially since the 18th century, they became ever more tolerant towards protestants, whom they nevertheless attempted to persuade to convert to Roman Catholic religion. Insofar that there were still beds available, poor residents were nursed free of charge in a hospital. As a form of recompense, it was customary from the Middle Ages that the effects of the patient, who was nursed for free and died childless in the hospital, became the property of the institution. This was common in de Southern Netherlands, although these succession rights

▶ The historical apothecary of the Sint-Jans hospital in Bruges, set up in 1643 (© Stedelijke musea Bruges)

▶ The hospital of Poperinge from the 17th and 18th century (photo K. Vandevorst)

were often disputed and legal steps were taken on a regular basis. For the poor sick who were admitted above the set number, the Heilig- Geesttafel paid a total of six to nine stivers on a daily basis. Foreigners and the prosperous paid much more for their daily accommodation. A senior sister and a trianee nurse, or several sisters, dependent on the capacity of the ward, provided for the daily hygiene and the distribution of food. Depending on the occupancy capacity of the hospital, each sister had to tend to 3 to 18 beds. They were relieved during the day and at night by others and were, during transportation of the sick, assisted by two male servants, one of which assisted the sisters when tending to men.

Assigned by the town that paid his wages, already in the 16th century large hospitals entrusted the diagnosis to the town physician, who made his rounds twice a day in the *beyaert.* Both sisters and surgeon had to act on the physician's judgment. Medicines for this were obtained from the own hospital dispensary with adjacent herb garden, where medicines were prepared by the dispensary sister and her assistant. That which was not on hand in the hospital dispensary was purchased by the sisters from an apothecary in town. The sisters were able to treat external lesions such as sores, injuries, leg and arm fractures and burns, or known internal disorders such as digestive symptoms and fevers. In the death registers of the Sint-Jans hospital in Brussels one can read that patients were admitted with contusions, fractures, seizures, kidney stones or gangrene and furthermore, women due to complications during childbirth, and even infected persons stricken by dysentery, smallpox or typhoid. Among the patients, we find men and women of all ages, but remarkably few children. Despite this minimum of medical care, some 60% of the patients were able to leave the hospital within a month; 10 to 20% even within a single week. The inconveniences caused by patients, through their ignorance and parsimonious nature, were reasons why patients were sometimes treated poorly. On the other hand, the commitment of the sisters during epidemics was highly praised by the magistrate. Not everyone was lucky enough to leave the hospital in good health. In Brussels, in 1725, a total of 1241 sick persons were admitted, 983 or 79% left the hospital in good health, 258 or 21 % were carried to their graves. In the Sint-Jans hospital in Bruges 21% of the patients died in 1783, in the Bijloke in Ghent during the years 1780-1797, an average of 18% of the sick deceased; in Herentals a total of eight patients died in 1788, which is 16%

◀ Le Balloir hospital (16th-17th century) in Liège (photo G. Focant © MRW)

◀ The rebuilt choir of the 17th century chapel of the hospital Saint Julien de Boussoit in La Louvière (photo F. Dor © MRW)

▼ Polygonal choir of the late gothic chapel (17th century) of the hospital in Rebecq (photo F. Dor © MRW)

▲
17th-century stairwell of the hospital for the incurably sick in Doornik/Tournai (photo F. Dor © MRW)

of the admitted sick. In the Sint-Elisabeth hospital in Antwerp, 20% of the patients passed away.

ADDITIONAL ACTIVITIES

In order to somewhat increase their income, the hospitals also invited lodgers. If the 'guest' did not cause upheaval and paid a fair amount, sometimes up to 1500 florins, it was officially agreed that the hospital would provide for the sustenance of these lodgers. Moreover, the hospitals sometimes also served as a boardinghouse for travelling clergy and as an obligated accomodation for those sisters and laymen who were punished. Less favoured guests were soldiers, who foraged or billeted at the expense of the hospital or even to plunder or ravage the hospital. This did not prevent the sisters from taking pity on wounded soldiers, who often occupied all the beds, jeapordizing the care of the poor sick and causing the care costs to exceed the income.

Finally, we conclude that several small hospitals, such as in Ninove, Turnhout and Asse, also served as a place of education in the New Age. One or two sisters were appointed as teachers and had to teach reading, writing, sewing and other manual skills to girl students from the boarding school, aged nine to fifteen. For the hospital sisters, maintaining a boarding school was not only seen as an additional source of income and a way to expand their social participation, it was also a great opportunity for the superior to recruit the best elements for the cloister community.

CONCLUSION

The significance of the hospitals in the New Age lies in the fact that they offered an emergency sanctuary for the poor indigent sick. The conventuals who worked in the hospitals, were in 1783 left to their own devices by emperor Joseph II, precisely because they served their fellow men. Where the French revolutionaries nationalised all abbeys and cloisters in 1796 and chased their residents onto the streets, irrespective of their impact in foregone centuries within religious, economic or cultural areas, the nursing congregations were spared. They, and they alone, were permitted to continue with their charitable task. They were also the first who were from 1809 again officially recognised by Napoleon as to whom was permitted to form an organisation.

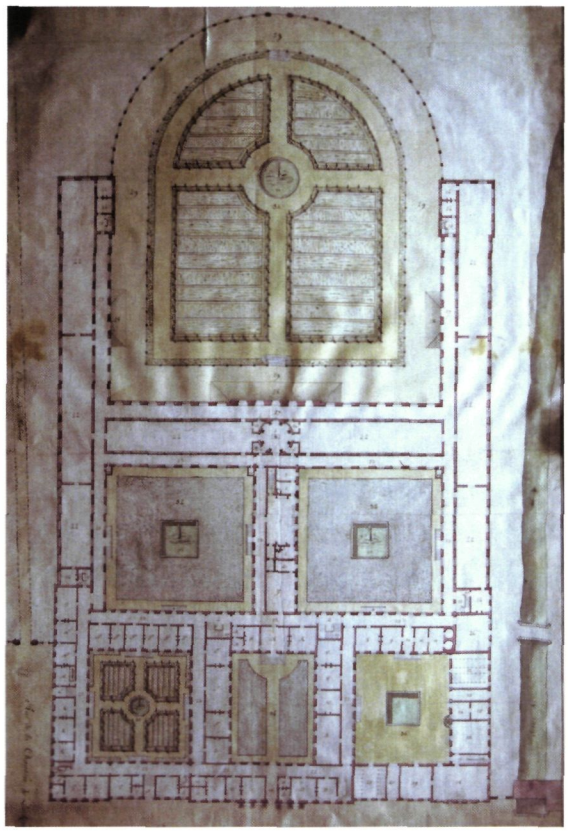
BIBLIOGRAPHY

ALBERDINGK-THIJM P.P.M., *De gestichten van liefdadigheid in België van Karel den Groote tot aan de XVIe eeuw (Mémoires couronnés et mémoires des savants étrangers, publiés par l'Académie royale des sciences, lettres et des beaux-arts de Belgique,* dl. 45), Brussel-Leuven, 1883; BONENFANT P., *Le problème du paupérisme en Belgique à la fin de l'Ancien Régime,* in *Académie Royale de Belgique. Classe des lettres et des sciences morales et politiques,* 2e reeks, 35, 1934; IMBERT J., *La centralisation administrative des hôpitaux et de la bienfaisance dans les communes du département de la Dyle,* in *Tijdschrift voor Rechtsgeschiedenis,* 19, 1951, p. 58-104 en 296-335; *Les Hôpitaux en France* (*Que sais-je?,* dl. 795), Parijs, 1974; *Histoire des hôpitaux en France,* Toulouse, 1982; OCKELEY J., *De Gasthuiszusters en hun Ziekenzorg. Bijdrage tot de studie van de actieve vrouwencongregaties in het aartsbisdom Mechelen in de 17de en 18de eeuw,* 2 dln., Brussel, 1992; QUERIDO A., *Godshuizen en gasthuizen. Een geschiedenis van de ziekenverpleging in West-Europa,* Lochem, 1974.

Dirk Van de Vijver

ARCHITECTURE THAT HEALS

PAVILION HOSPITAL CONSTRUCTION IN 19TH CENTURY BELGIUM

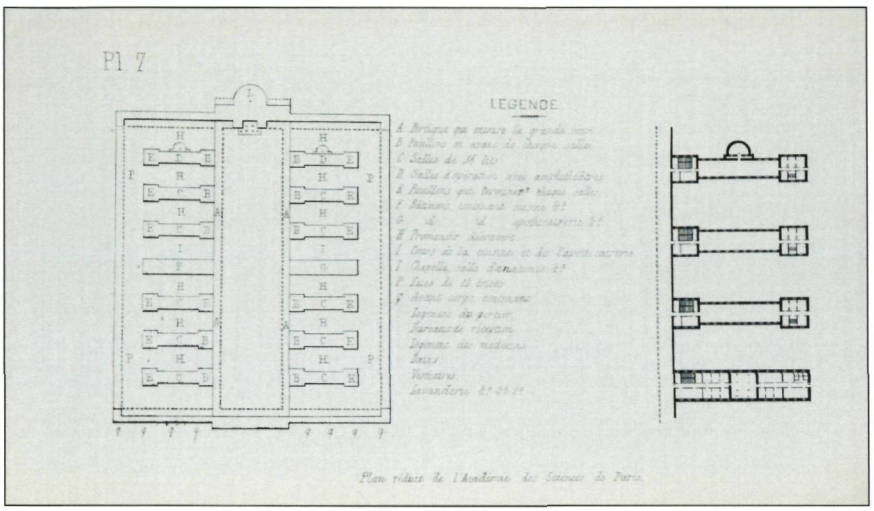


▶ Unexecuted design (1784) of Louis Montoyer for a *ground floor of* a hospital on the Paardenmarkt in Brussels (Paris, Archives Nationales, Cartes et Plans, N/III/ Dyle/10.1)

From the reforms of Joseph II (1780-1790) up to the First World War, the hospital/ hospital in the Southern Netherlands slowly gained its unambiguous denotation of hospital: a place where the sick are nursed by medically-trained personnel in a building specially designed for this. The emancipation of the principal actors by the building of the hospital – the public authorities, the physicians/ surgeons and the architects/ engineers – played a principal part in this process, together with the arising and the extending of the modern State, the evolution of medicine and the 'scientification of construction'. The medical and hygienic advisory committees of the municipal, provincial, but especially of central government, integrated the new medical insights, especially that concerning the mechanisms of disease carriers, and the technical equipment of heating and ventilation, in a continuing typological adjustment of the ideal hospital. Central with this was the belief that a well constructed building, could contribute as a *machine à guérir*, to the healing process.

AN INITIATIVE TOWARDS A NEW POLICY

The care of the poor and needy such as the ill and the elderly in society was since the late Middle Ages in the Southern Netherlands the theme of a spe-



◀ Design by B. Poyet, presented by the Parisian Académie des sciences in 1786 (in UyTTERHOEVEN A., Notice sur l'hôpital Saint Jean de Bruxelles, ou étude sur la meilleure manière de construire et d'organiser un hôpital de malades, Brussels, 1862, pl.7)

cial collaboration between the government and the private sector. Municipalities and/or rich private individuals provided for the accommodation (infrastructure) and the material resources (patrimonium), the clergy took the service provision upon themselves. In the second half of the 18th century there was an increased interest in this material from the states and central government. One endeavoured, often in vain, towards rationalisation with a specific policy for each target group and towards a centralisation per municipality, under provincial or central governance; there were thus, for example, in the fight against begging and vagrancy, provincial houses of correction established by the States of Flanders and Brabant.

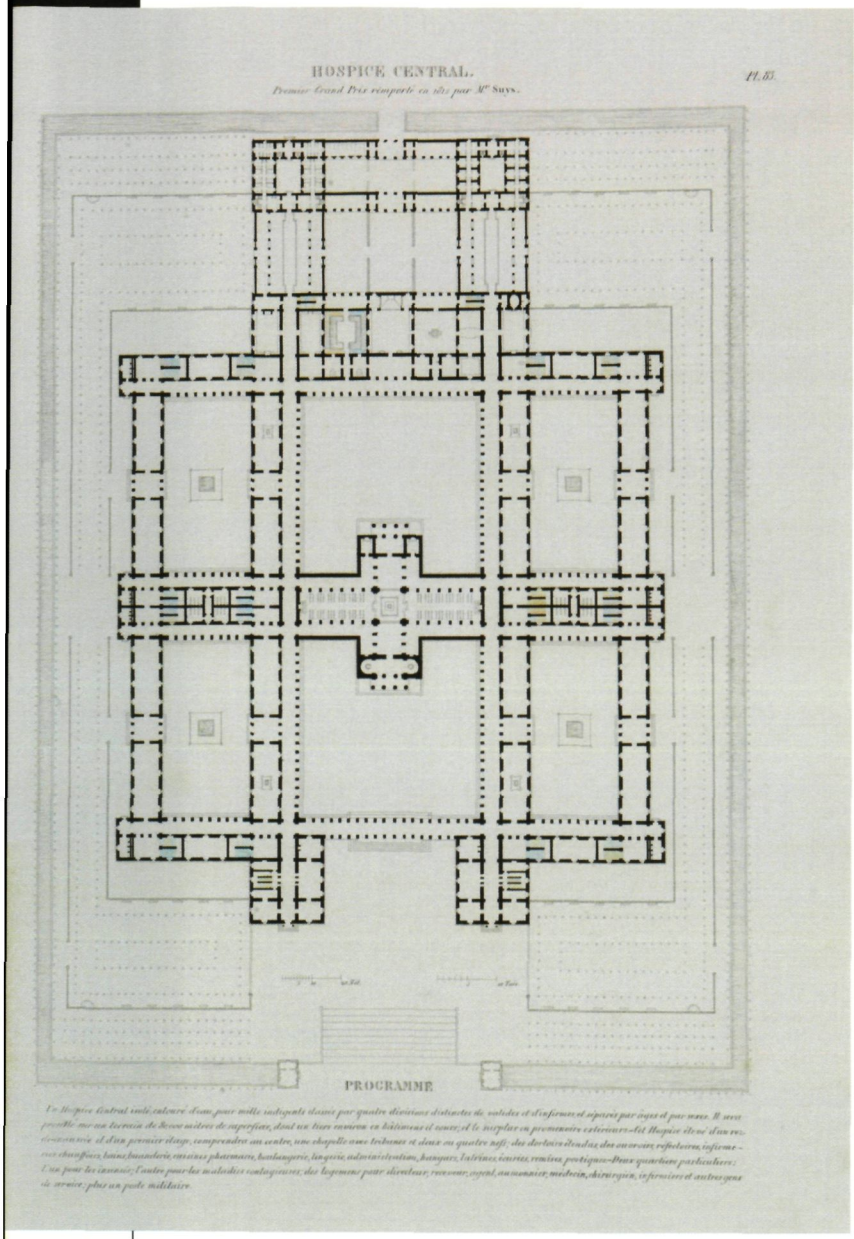
As was stated by the English traveller and hospital and prison reformer, John Howard: the situation around 1770 in the Southern Netherlands hospitals was quite saddening. Most of the hospitals had only one or two wards. Thanks to a partition it was indeed possible to separate the men from the women, yet keeping patients separated on the basis of their medical condition never seemed an issue. Those who where contagious lay next to those wounded patients and patients operated on, in general with several persons in one bed. Operations were performed in the ward itself; there were often no baths. In short, a stay at a hospital did not have the desired effect for many of the poor.

In the Austrian beneficence policy of Joseph II, the *hôpital général* took up a central place. The Viennese institution had 2000 beds and, amongst other things, a separate wing with a maternity clinic and annexes for the incurable, mentally ill and foundlings.

In the Southern Netherlands there was a similar ambitious hospital reform programme, with a real Hospital department within the Commission for Charitable Institutions, which managed the material resources of the charitable institutions in 1786, which however failed due to the Brabant turnaround wavering with respect to government performance and a manifest underfinancing. The most important realisation was the establishment, in the former Sint-Pieters abbey in Brussels, of a 'temporary hospital', which under the management of the Hospital department was extended with a maternity area, and departments for the insane, mentally ill and the incurable. It became thus the first state hospital of the Southern Netherlands, which grew to the magnitude of the Sint-Jans hospital in Brussels. The design dating to 1784 from the architect Louis-Jozef Montoyer for a new main hospital at the edge of the capital provided for spacious connected wards and a neo-Palladian façade, but was never implemented.

A NEW TYPOLOGY

The fascination of Joseph II for hospital construction possibly also influenced the French reform proposals. On a visit in 1781 to his brother-in-law, Louis XV, Joseph II in any case raised the poor hygienic conditions in the *Hôtel-Dieu* in Paris, which since a fire in 1772 was the centre of attention of public and scientific interest. The preference of the French *Académie des sciences* for new construction with pavilions, after an example of the English Stonehouse naval hospital in Plymouth, built by door architect Rovehead in 1756-1764, became an international trend-setter.



▲
Design (1812) of T.-F. Suys for a hospice central (in VAUDOYER A. en BALTARD I., *Grands Prix d'Architecture. Projets couronnés par l'Académie royale des Beaux-Arts de France*, Liège, 1842, pl.83)

THE CREATION OF AN INSTITUTIONAL FRAMEWORK AND THE LAICIZATION AND MILITARISATION OF THE FRENCH ERA

The centralised and laicizing policy of the French Nouveau Régime (1794-1814) realised at one stroke the ambitions of the end of the Ancien Régime. The care for the sick and relief of the poor became an explicit government task, entrusted to the municipalities.

In contrast to France, the goods and the earnings of the South Netherlands hospital and charitable institutions were not nationalised or sold, but their management was transferred to the municipalities and disputes were settled at a departmental level, matters of a general order, at a national level. For their management, municipal administrative commissions were established: the Commissies der burgerlijke godshuizen and the Burelen van weldadigheid: each was composed of five members, appointed by the municipal councils. The Commissions provided for the shelter and care of the poor sick, orphans and other needy persons in the houses of God and hospitals, the Burelen provided for relief at the homes of the poor. Prefect Doulcet-Pontécoulant extended the centralisation somewhat further for each of the Dijlearrondissementen and there was a *Conseil général des hospices et secours* established, which in a very short time swallowed up both the hospital commissions as well as the charity commissions in these districts. With this the basic administrative structure for the Netherlands and Belgium era was delineated, which would be changed as late as 1925.

The elaborated academic proposal of 1786 by Bernard Poyet consisted of a number of wards housed in separate pavilions, connected in two parallel arrangements, and separated from each other by a walkway having the breadth of a pavilion. A ground floor gallery around this walkway allowed access to the pavilions. This architectural translation of the at that time customary medical view that the sick through the 'uitwasemingen' (miasmas) from the sick body were transferred via the air, became the norm.

▼
Façade of the cloister building of the Saint-Laurent abbey in Liège (photo G. Focant © MRW)

The laborious realtion between the municipal commissions and the religious nursing personnel – exorcisms, compulsory oath of allegiance to the republic, and others – came after the Concordat of 1801 somewhat to a normalisation, but the clergy remained only subcontractors in municipal service. The re-educated poor sick sector had to make do with little extra resources and there was hardly any new construction. The patrimonium was brought up to standard as well as could be expected, co-defined by the central architecture administration, the *Conseil des bâtimens civils*, adaptations entailed: the separation of the various categories of patients, ventilation, toilets. Moreover, the bad reputation of the hospital from the Ancien Régime led to an absolute policy preference for home care. Interesting designs for public hospitals remained unexecuted. That is why for South Netherlands students of advanced architectural education at the *Ecole spéciale d'architecture* in Paris, the public hospital was added to the Programme. The Rome contest of 1812 had as subject *"un hospice central, destiné à recevoir 1000 indigens de plusieurs départemens, valides ou non-valides, de tous les âges, de tous sexes, sur un terrain de 80.000 mètres de superficie"*. Tilman-François Suys won with a design in which "*iedre zwakheyd kon afgezonderd woonen*". Even though the general layout of his design, at first glance, evokes the typology of a palace/ cloister, the design essentially encompassed individual wards connected through open galleries.

Given the military agenda of the French regime, it was not surprising that there was however substantially invested in military hospitals. For example, old cloister buildings, such as the former Jesuit College in Antwerp and the abbey of Saint-Laurent in Liège, were hastely converted to military hospitals. For obvious reasons, the principle of pavilion con-

▼ Stairwell in Louis XV-style, situated in the abbey complex of Saint-Laurent in Liège, in 1793 converted to a military hospital (photo G. Focant © MRW)

struction could not be applied here. To establish a large naval hospital in Antwerp, in accordance with the prevailing opinion at that time of what was considered to be the ideal location for a hospital, one opted for a place outside the town: namely the former Sint-Bernardus abbey in Hemiksem. Louis-Charles Boistard, head of the maritime works of the port of Antwerp and Flushing, converted the complex into one large connected ward, with a central

▲
Street side view of presently the Groot Godshuis, presently Pacheco Institute in Brussels (photo O. Pauwels)

walkway flanked with hospital beds on both sides. This reconversion accordant to a dated typology, whose first design in 1810 wasn't executed, was, however, later completed with pavilions for laundry rooms and a school of medicine with a mortuary. The preference for the pavilion typology at military hospitals, which was indeed closely related to traditional barracks construction, was predominantly present in the Dutch and Belgian period, as can be seen from the military hospitals at Beverlo, Brussels, Antwerp and Beveren-aan-de-IJzer.

PAPER PAVILIONS: THE NEW FERVOUR OF HOSPITAL CONSTRUCTION IN THE KINGDOM OF THE NETHERLANDS

After peace and prosperity had been restored in the Kingdom of The Netherlands, especially from the 1820s, this gave a new fervour to the public health policy. For the municipal authorities, the physician and the architect the civil urban hospital became the centre of attention.
The architecture competitions associated with the urban art exhibitions focused more and more on the hospital sector: "*un hôtel des invalides pour mille hommes*" in 1818 and "*un hôpital civil propre à contenir mille lits, avec toutes ses dépendances*" in 1819. Bourla's distinguished and preserved design from 1819 integrates in an interesting fashion the solution of the *Académie des sciences* into a cruciform composition. The management and service areas, with operating room, were linearly grouped, perpendicular to the Parisian standard solution with two parallel rows of pavilion wards and gallery.

In preparation of the new construction plans for the Sint-Jans hospital in Brussels. A commission was established in 1821 to study the recent developments in European hospital construction such on the basis of the available literature and study trips. The commission was composed of aldermen, physicians, an engineer and an architect. Their reports attest to a great erudition and their preference for Plymouth and the proposal from the French *Académie des sciences.* The architect visited Germany, Italy, France, and later also England. In the Dutch period the construction work however remained limited to the construction, from 1824 to 1827, of the Groot Godshuis from a design by the architect Henry Partoes. This building, on a rectangular ground plan with two inner courtyards, would for a long time remain the largest home for the elderly in Brussels.

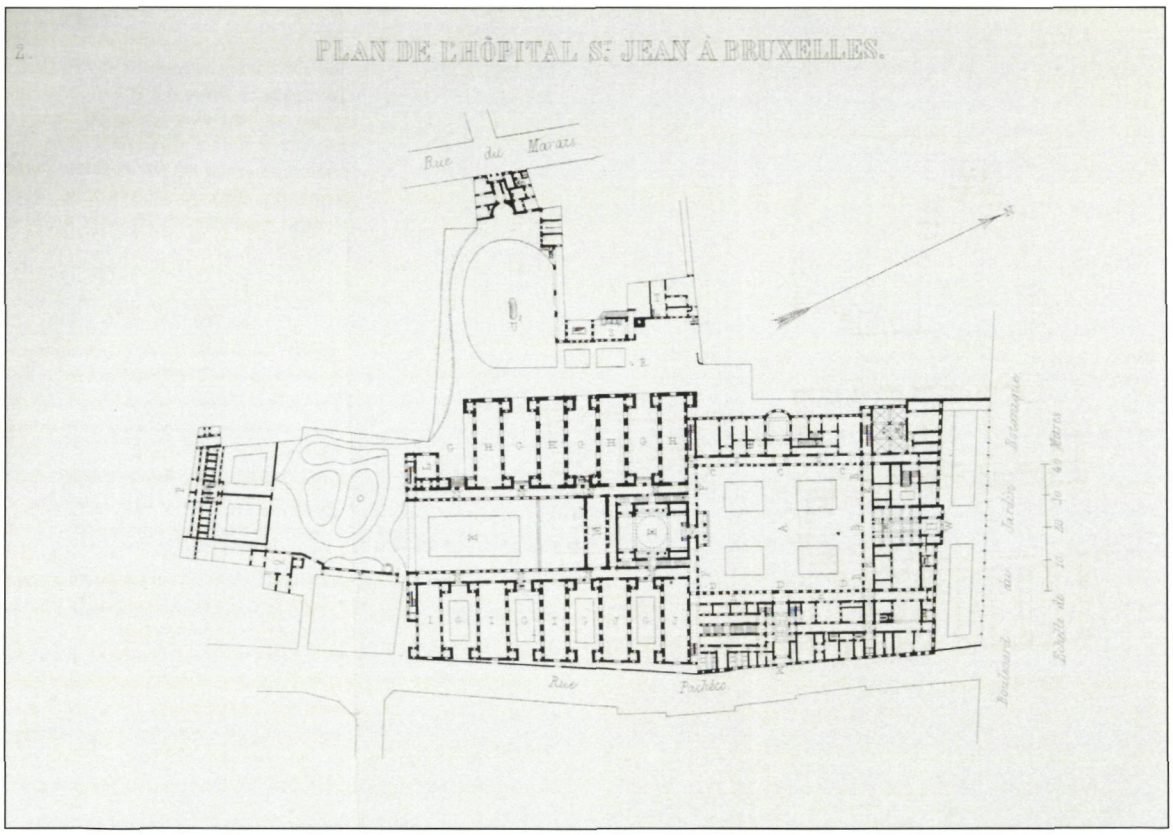
In the Kingdom of the Netherlands a decisive step was taken towards the emancipation of the psychiatric institution, with the publication of *Traité sur l'aliénation mentale et sur les hospices des aliénés,* by Joseph Guislain. His designs clearly show that other design principles apply to a psychiatric institution than to a hospital: the main focus lies with the isolation of specific categories of patients and specific therapies, rather than with the danger of contagion or the problems surrounding the operating room. Thanks to his efforts to have institu-

tional psychiatry recognized, with a key role for the physician, the architecture of the psychiatric institution would undergo an own evolution, which would long pay homage to the cloister typology. The Guislain institute of 1851-1857, after a design from the architects Louis Roelandt and Adolph Pauli, in Ghent, is an interesting example of this.

STONE PAVILIONS: THE FIRST PAVILION CONSTRUCTION AFTER 1830

In the early years of the Kingdom of Belgium, the first hospital was finally constructed after a model of the Parisian *Académie des sciences* of 1783. The new Sint-Jans hospital in Brussels of 1837-1843, now demolished, had nine pavilions, connected by a gallery of two floors, preceded by an administrative and service wing, covered walking area and a chapel in the Italian Renaissance style. Men and women each had their own floor, and there was a separation by gender of the *geblesseerden [injured]*, the *besmettelijken [contagious]* and the *koortsigen [fevered]*. Much attention was also paid to the ingenious use of ventilation, construction materials and the heating system. The too narrow inner court, the short distance between the pavilions, the chapel that was squeezed in between the pavilions and the covered walkway of the Brussels realisation, all due to the small size of the construction site, were however subject to criticism, amonsgt others, from the senior surgeon of the Sint-Jans hospital in Brussles, André Uytterhoeven. He nevertheless also praised this institution for being "*un des plus beaux hôpitaux de notre époque, qui fait, à juste titre, l'admiration des nombreux étrangers qui viennent le visiter*". In the second edition of his *Notice sur l'hôpital Saint-Jean de Bruxelles, ou étude sur la meilleure manière de construire et d'organiser un hôpital de malades* the author also praised the new Parisian Louis-Philippehospitaal of 1839, later on La Riboisièrehospitaal. The author also lauded the indisputable benefits of the pavilion hospital as opposed to the square-shaped type, where the wards cross each other and where chiefly in the corners the wards were too close to each other, the double court-type in which it is difficult to keep the different types of sick persons separated, the cruciform-type, that faces the same problems, and the fanned-out or star-shaped type, which causes problems where the wings converge. The ideal

▼
Plan of the Brussels Sint-Jans hospital, (1837-1843) by H. Partoes (in UYTTERHOEVEN A., *Notice sur l'hôpital Saint-Jean de Bruxelles, ou étude sur la meilleure manière de construire et d'organiser un hôpital de malades*, Brussels, 1862, pl. 2)

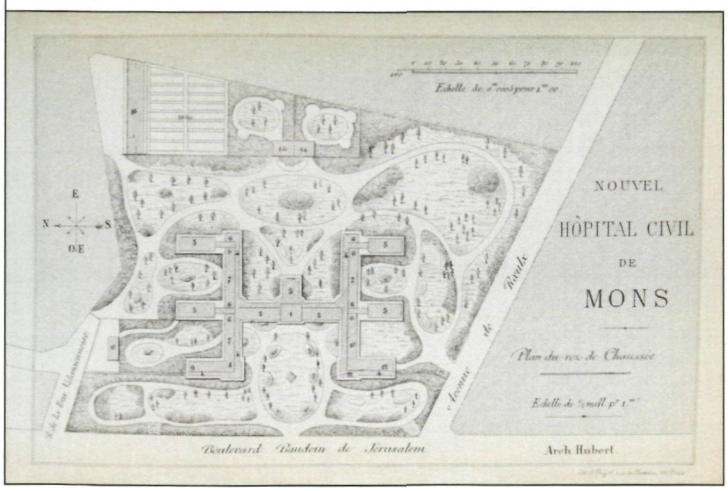


separation of the various classes of sick persons in perfect isolation, amply surrounded with air circulation and winds, was for Uytterhoeven only practicable by using pavilions-type construction. A type not mentioned by the author, the open court-type with a U-shaped ground plan, opening to the street, somewhat meets this criticism. The new Sint-Pietershospitaal in Leuven of 1840-1848 was based on these Parisian and London hospital court-types. *Hospices,* where the separation of different categories was not as stringent, and the still highly mixed *hospices-hôpitaux* in the 19th century, generally abandoned the relatively expensive solution of pavilion construction.

ISOLATED PAVILIONS: BELGIAN HOSPITAL CONSTRUCTION AND THE SUPREME COUNCIL FOR HYGIENE

With the Supreme Council for Hygiene, Belgian hospital and hospital construction entered a new era. Within this council the Hospital Committee evaluated all new construction, restorations and the expansion plans of municipal hospitals, hospitals and orphanages. On the basis of a design dossier with plans, possibly with an additional on-site visit, the Hospital Committee formed an opinion. With this the location, orientation, typology, technical set-up, specifications and take-off list were subject to a meticulous examination. This sequence had a methodical character: an unfavourable site, after all, made further analysis of the design a useless exercise. The basic philosophy, as formulated by Uytterhoeven, is again to be found at the Hospital Commitee. Hygiene comes before an economic lack of foresight or architectural pretentions.

▼ Hospital of Mons (1857-1869) (in *Conseil supérieur d'hygiène publique, Rapports adressés à MM. les Ministres de l'Intérieur et de la Justice*, V, 1874-1876, p.224)



▲ Main entrance of the Brugmann hospital in Brussels (photo O. Pauwels)

More so, stylistic considerations were not relevant, and financial concerns only played a role if the same objectives could be attained with less resources, and thus a more sober architecture could be exerted. On occasion of the construction of the civil hospital at Bergen (1857-1869) the Supreme Council for Hygiene developed a Belgian standard: the system of the completely isolated pavilions. This system became the ideal model from a pure hygiene standpoint and became the norm in the later regulations of 1884 and 1898. The hospital at Bergen has four pavilions with two floors, which are connected via footbridge to the service buildings. All large civil hospitals therefore followed these principles: Verviers, Schaarbeek with eight pavilions connected by an open gallery and an underground service corridor, the new *hôpital Bavière* in Liège up to the Brugmann hospital by Victor Horta.

In addition to the general typological design, the hospital construction regulations of 19 February 1884, mention the *Instruction pour la construction et l'arrangement intérieur des hôpitaux et des hospices,* executable design and directives with respect to the orientation of the pavilions, dimensions of halls, beds, corridors, windows, ventilation and heating. It is interspersed with a number of key concepts: "*architecture simple, exempte d'ornements superflus, meilleures règles de l'art de bâtir, solidité, économie, sûreté, salubrité, assèchement, matériaux incombustibles*".

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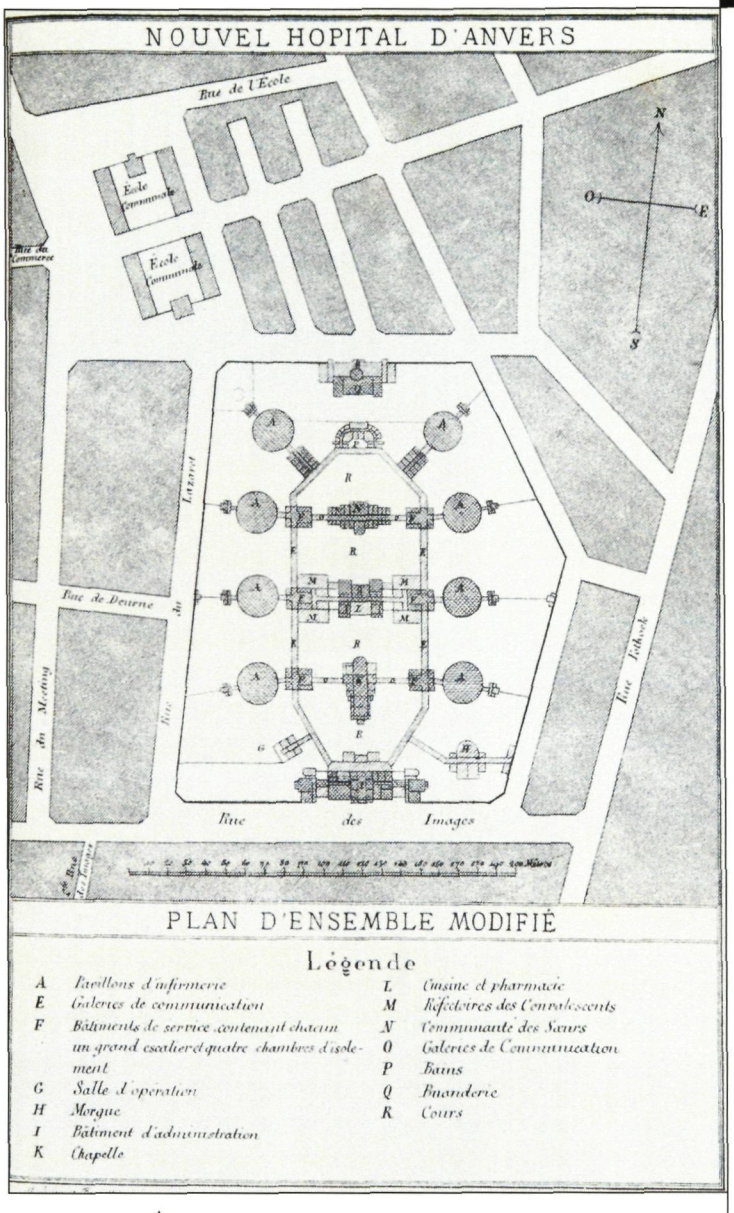
Pavilions of the Brussels Brugmann hospital (photo O. Pauwels)



▲
The corrected version of the design for the Antwerp Stuyvenberg hospital (1878-1885) by L. Baeckelmans, J. Bilmeyer and J. Van Riel (in *Conseil supérieur d'Hygiène publique, Rapports adressés à MM. les Ministres de l'Intérieur et de la Justice*, IV, 1867-1873, p.174)

Within the pavilion hospitals the wards themselves were also subject to a significant evolution. The ideal number of patients showed a clear decreasing trend. The wards of the Sint-Jans hospital in Brussels still housed a total of 24 beds, when the regulations of 1884 already set a clear maximum of 20 beds; the regulatory inter-municipal hospital of 1897 and the early 20th century Brugmann hospital each counted 12 beds.

The service areas of a ward in the Sint-Jans hospital in Brussels had an office for the nurse, a bathroom, a toilet and an examination room. At the beginning of the 20th century, the number of annexes had grown so much, that their total surface area exceeded even that of the ward. Therefore, the architect Horta developed a pavilion for the Brugmann hospital with an entrance in its centre, around which the ancillary functions, for the servicing of two wards, were placed. The technical equipment was becoming ever more sophisticated.

Variations were made on the common rectangular shape of the ward. The prize-winning design for the Stuyvenberg hospital (1878-1885) in Antwerp proposed pavilions with a circular-shaped floor plan in a radial arrangement. This was quite a radical application of a recommendation from the Hospital Committe to round off the corners of wards in order to prevent stagnated air. The architect praised the circular-shaped pavilions for their maximum isolated position, maximum light incidence, better ventilation, efficient operation and simple surveillance. The Supreme Council for Hygiene, however, mainly saw drawbacks when it came to circular-shaped wards: expensive, difficult to heat and difficult to expand. Another design was chosen, which more besfitted its 'Belgian type solution', the civil hospital in Mons. This internal Belgian criticism would have little influence on the great international impact the circular-shaped wards would have.

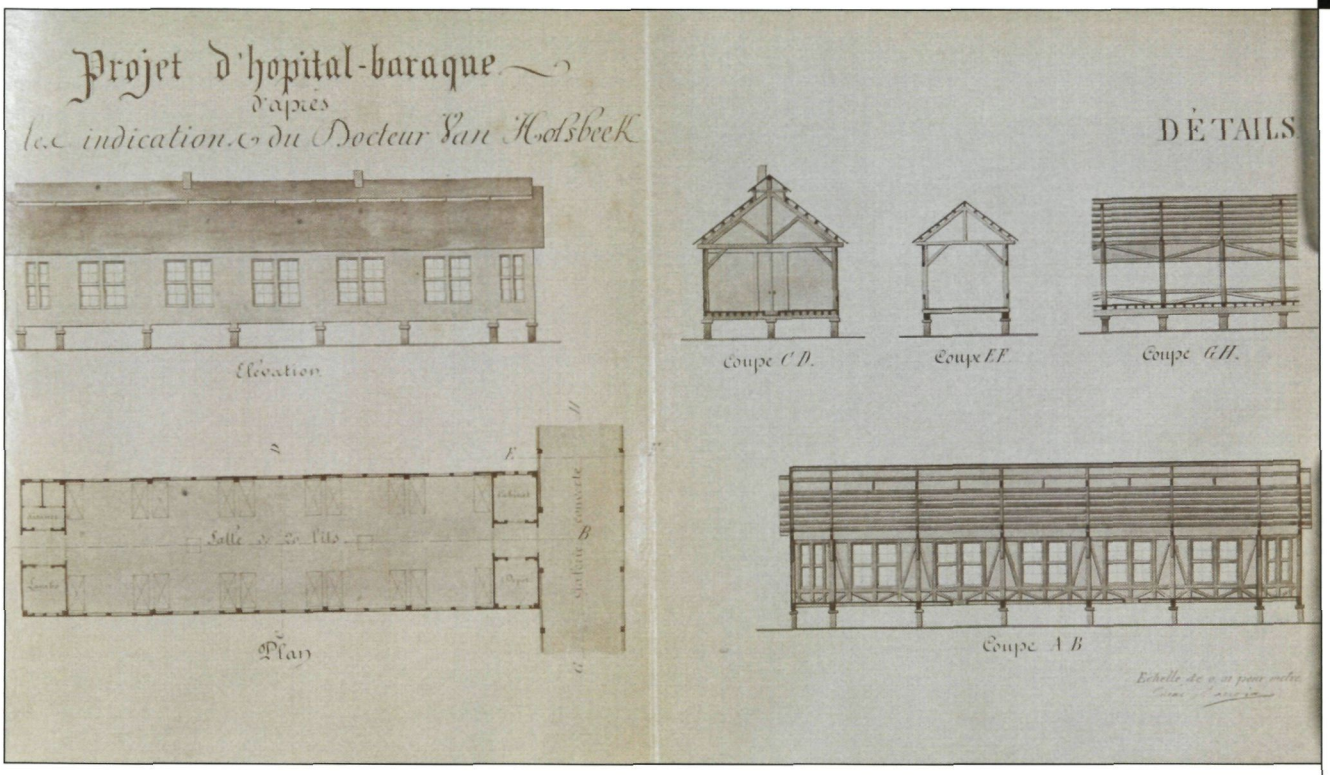
▶ Front of the main building of the Stuyvenberg hospital in Antwerp (photo K. Vandevorst

▲ Interior of the cafeteria in one of the round wards of the Antwerp Stuyvenberg hospital (photo K. Vandevorst)

▲ A round ward of the Stuyvenberg hospital in Antwerp (photo K. Vandevorst)

SMALL AND RURAL?

During the years 1864 and 1884 international statistics with death figures in hospitals brought the large overpopulated hospitals into disrepute. The lower mortality in small rural hospitals, and the rife hospital illnesses in the larger urban hospitals, also started a discussion with respect to 'permanent hospitals'. Various proposals from the hands of physicians and hygienists for the quick establishing of temporary *hôpitaux volants* or *hôpitaux-baraques* date from this period, and are no longer only directed towards the military. The *hôpital-baraque,* designed by physician Van Holsbeek and drawn up by architect Oscar Lacroix, is an example of this. The Act of 6 August 1897 regulated the establishment of intermunicipal hospitals, of which Beirendrecht was one of the first.



▲
A 'hôpital-baraque' designed by Dr. H. Van Holsbeek and drawn up by architect O. Lacroix (in their *L'hospitalisation en temps de paix et en temps de guerre. Dissertation avec plans d'un hôpital-baraque*, Brussels-Paris-Leipzig, 1876)

THE HYGIENIC REVOLUTION

This discussion about the small and rural versus large and urban hospitals, which fully raged at the beginning of the 20th century, was settled by medical science. The discovery of the microbe in 1856 by Pasteur, and the application of the treating of wounds by Joseph Lister replaced the vague 'miasmas' through a threatening organism. The antiseptic treatment of wounds by the Glasgow professor locally destroyed the periling microscopic organisms. The German bacteriologist, Robert Koch, proved Listers theory through the laying of an unequivocal connection between specific bacteria and specific infections. With this he especially pointed out the danger of the transfer through contact by the hands and instruments of medical personnel. Pasteur and Lister were still also convinced that the bacteria principally relocated via microscopic dust particles in the air. Additional to and after the antiseptic (the disinfection of the wound) there came the asepsis: the prevention of contagion through a meticulous sterilisation of all those things that come into contact with the place of operation. The new methods had a revolutionary influence on hospital construction with spectacular effects on the mortality figures. The idea of dust being a transmission agent led to the combatting and avoiding of dust accumulations. The rounded corners of the wards were now accorded another reason for their existence; away with mouldings on gates and furniture, and with porous or penetrating materials. In short, a medical substantiation for the functionalistic use of materials of modernism: glas, stone, plastered or glazed brick, metal. The asepsis made a scientifically-based prevention construction possible. Disinfecting rooms were installed in the hospitals. Additional to the dividing of men and women, the hospitals were now divided into a septic and an aseptic part. The general objection against permanent and urban hospitals thus lost impetus. The *hôpitaux légers/baraques* were only retained for emergency situations such as wars and epidemics. German experience had meanwhile had for that matter also taught that the temporary hospitals, built with inferior materials, swallowed up high restoration budgets and were not compatible with the requirement of patient comfort. The ultimate consequence of this medical evolution, and of the introduction of the lift, namely the economic superiority of the floor-high blocks on the pavilion typology, would however only have an initial

Belgian application with the new Sint-Pieter in Brussels, and this very much against the wishes of the Supreme Council for Hygiene. With the development of bacteriology, there was, during the last decade of the 19th century, also an increasing training of nursing personnel necessitated. Paramedic professions were recognised by the public authorities, and these also appeared outside of the strict ecclesiastical sphere of influence. The Royal Decree of 4 April 1908 made the training of nurses, and also of cloister sisters, compulsory.

recovery hospitals, sanatoria for tuberculosis patients, military hospitals, outpatient clinics for eye, ear and nose affections, gynaecology, venereal diseases; The university outpatient clinic of Ghent, after a design of architect L. Cloquet, small medical centres in town, such as the one by the Schuitenkaai in Brussel, each with its own needs and its own typology. The typology in pavilion type hospitals also aimed to isolate the specific categories of diseases.

Sint-Pieters hospital (1935) in Brussels (© OCMW Brussel)

SPECIALIZATION AND DECENTRALISATION

Specialisation and decentralisation are another key theme permeating through the evolution of 19th century hospital construction. In the first state hospital of the Ancien Régime, the mentally ill and maternity clinic had already a specific place. Several decades later special buildings for this were established, such as the maternity clinic in Ghent after a design from architect Pauli. Many special hospitals followed: hospitals for contagious diseases, special hospitals or hospital barracks for the wounded.

CONCLUSION

During the 'long' 19th century, a period from 1780 to 1914, a true revolution occurred in Belgian hospital construction. The government, medical professionals and architects played a crucial role in this. From 1850, A controlling and standardizing central administration was added to the French fundament of the municipal/ district hospital commissions. In several stages, with the continuing varying medical insights in mind, medical professionals and architects of the Supreme Council for Hygiene attempted to create a healing architecture.

The typology of the pavilion hospital was, during the entire period in question, gradually perfected and deemed to be the right answer to each medical development.

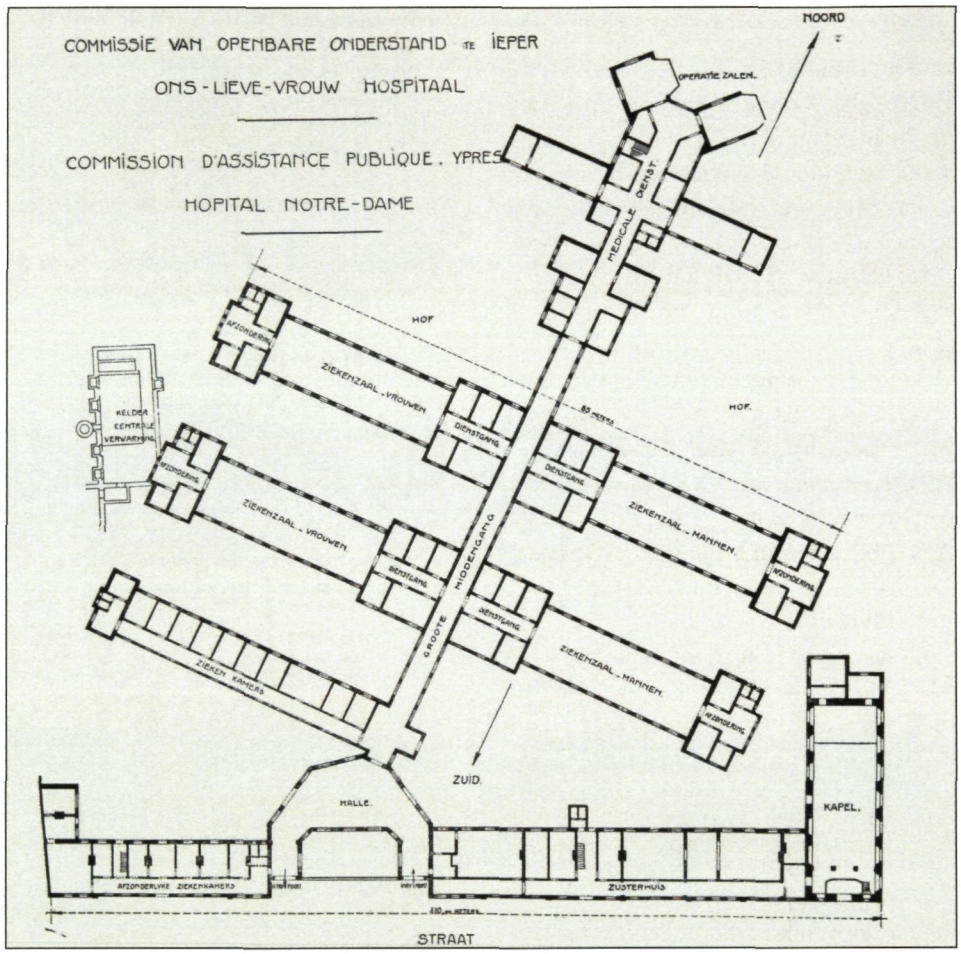
This specific Belgian policy instrument, the Supreme Council for Hygiene, has earned Belgium a place in the international historiography of hospital construction and not only as a clear international forerunner or source of inspiration.

BIBLIOGRAPHY

Annalen van de Belgische Vereniging voor Hospitaalgeschiedenis; BONENFANT P., *Le problème du paupérisme en Belgique à la fin de l'Ancien Régime*, Brussel, 1934; Conseil supérieur d'hygiène publique, *Recueil des rapports*, Brussel, 1849-1914; CLOQUET L., *Traité d'architecture*, Parijs-Luik, 1900, dl. 4; DEPAGE A., VANDERVELDE P. en CHEVAL V., *La construction des hôpitaux. Etude critique*, Brussel-Leipzig, 1912; DEPUYDT J., DHAENE L., SCHUYTSER K. en VELLE K., *Het verbond der verzorgingsinstellingen 1938-1988. Vijftig jaar ten dienste van de caritasverzorgingsinstellingen*, Leuven, 1988; DE MAYER J., DHAENE L., HERTECANT G. en VELLE K., *Er is leven voor de dood. Tweehonderd jaar gezondheidszorg in Vlaanderen*, Chapellen, 1998; LOMBAERDE P., *Louis-Charles Boistard bouwt voor Napoleon een ziekenhuis. De Sint-Bernardsabdij als Frans marinehospitaal (1809-1814)*, in *750 jaar Sint-Bernardusabdij*, Deurne, 1996, p. 55-65; IMBERT J., *La centralisation administrative des hôpitaux et de la bienfaisance dans les communes du département de la Dyle*, in *Tijdschrift voor Rechtsgeschiedenis*, XIX, 1951, p. 58-104 en 296-335; VAN DE VIJVER D., *Ingenieurs en architecten op de drempel van een nieuwe tijd (1750-1830)*, Leuven, 2003, p. 94-98, *cat.nr.* 30-31.

Jean-Marc Basyn

HOSPITALS DURING THE INTERWAR PERIOD



Onze-Lieve-Vrouw hospital in Ieper, (*Hospitalia*, nr. 4-5, 1942)

The interwar period and the period before are characterised by radical societal changes: the arising of mass culture, the mordenisation of daily life and the simultaneous mass distribution of new comfort devices (car, telephone, ready-made kitchen etc.), the loss of the small villages, the never foreseen expansion of the suburbs, the increase of employment in the industrial and public sector, the growth of big business but also of the economic democratisation (the rise of the bourgeoisie), the political emancipation of the workforce due to a militant unionism, but also new political (general voting rights) and social (social security, public health) attainments. This all was accompanied by the rise of a new architectural language, generally described as modernism. Since the end of the 18th century the hospital had made enormous progress within the scientific, hygienic, technical and social areas. During the interwar period it also undergoes a real typological and architectural evolution. Similar to social housing, school and other collective institutions of public utility, the hospital is an important icon of social modernisation, which through the commited spirit of modernism is fostered. Where the 19th century hospital still had a monumental and urban architecture, the interwar hospital clear-

ly had a more individualistic and functional dimension through the specialisation of medicine and the subsequent rationalisation of available space. The hospital leaves the ambience of monumentality to grow to a collective facility in service of science and the sick. It becomes an actual *machine à guérir.*

TYPOLOGICAL EVOLUTION

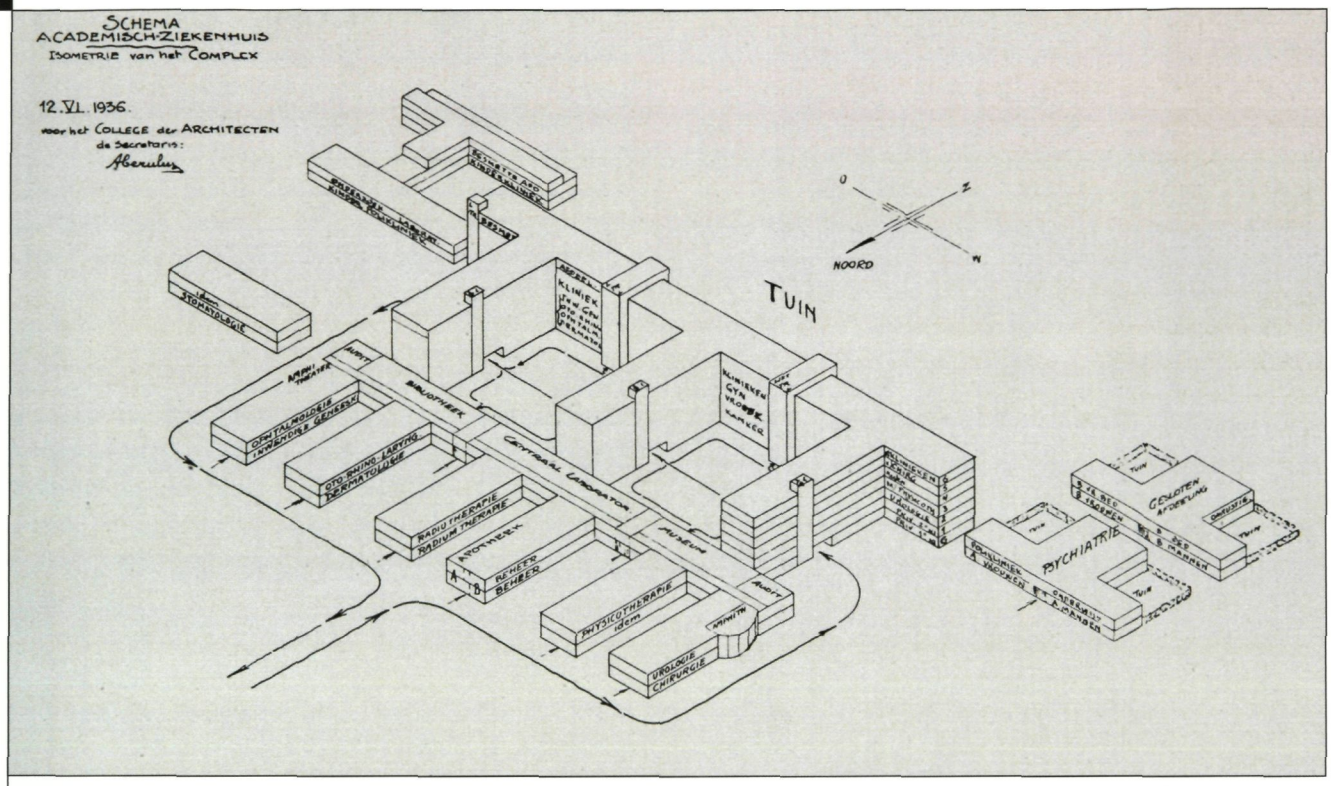
At the end of the 19th century and the beginning of the 20th century the pavilion shape is still broadly distributed. The principal reason for this still belongs to the typical 19th century ideas with respect to hygiene. The interwar period however prescribes the centralisation and the vertical rationalisation of the hospital functions and opts for the block shape. The pavilion shape namely quickly shows limitations for the new spatial and organisational requirements. The costs amount to approximately double that for a block-shaped hospital and the surface area and the distances that the personnel and the sick are required to travel, are too great. Nevertheless, block-shaped institutions are still built during the interwar period. Examples of this are the Onze Lieve-Vrouw in Ypres and the French hospital Queen Elisabeth in Sint-Agatha-Berchem. Psychiatric hospitals are on account of their special requirements still always constructed in the shape of a pavilion, such as the hospital at Eupen. The first hospital which really does meet the principle of the block shape, is that of the Sint-Pietershospitaal in Brussels. The architect Jean-Baptiste Dewin allows himself to be inspired by the newest hospitals in Great Britain and the United States. The university hospital in Ghent is then again a combination of the block and pavilion shape. The design is the result of a close collaboration between professor Frans Daels and the College of Architects of the academic hospital headed by Henry van de Velde. The sanatoria take into account the conditions of orientation and the separation of circulations and functions. They are oriented in breadth and length towards the sun for a maximum of sunlight, as for example in Jauche, Brasschaat and Tombeek.

ARCHITECTURAL SCOPE

The architecture of the interwar period commits itself to social modernisation. Ideals that break with civil and historicizing architecture, make a mark-up around the turn of the century and argue for a relinquishment of the ornamental and for the

▲ The French hospital queen Elisabeth in Sint-Agatha-Berchem (photo K. Vandevorst)

▼ Sketch by architect Dewin of the Sint-Pietershospitaal in Brussels



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The University hospital in Ghent (in *Hospitalia*, nr. 3, 1939, p.65)

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The sanatorium (1935) by architect Léon Mercenier in Jauche (in *Bâtir*, nr. 33, 1935, p.322)

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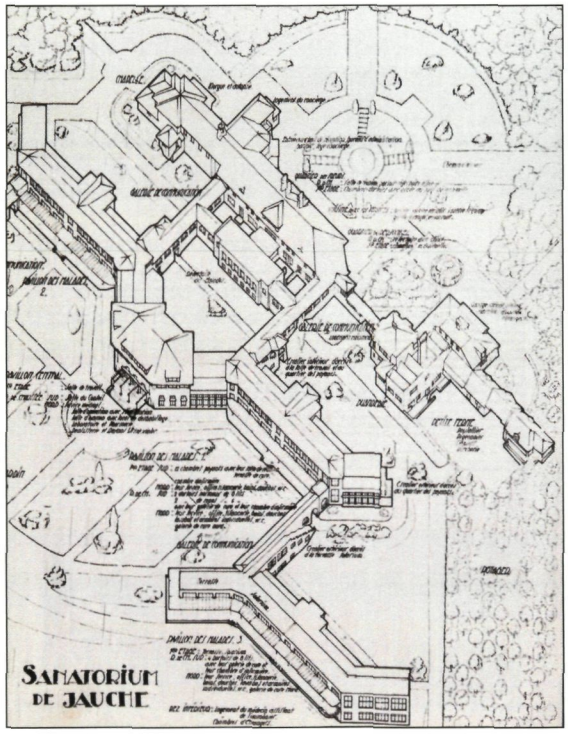
University *hospital in Ghent*, with the main building in the rear (photo K. Vandevorst)



rationalisation of architecture and urban planning. Industrialization and standardization were possible on account of the technical progress in industrial architecture and the delopment of new construction materials in the 19th century such as concrete, glass and iron. The construction of hospitals is completely based on functionalism, spatial organisation and strict hygienic limitations. The cost savings, the construction logic and the functionalism of the industrial aesthetics serve as guiding principles for the architects who design hospitals such as Marcel Leborgne, Gaston and Maxime Brunfaut, Edouard Van Steenbergen, Jean-Baptiste Dewin, Léon Mercenier, Gustave Maukels, Joseph Moutschen and Henry van de Velde.
Around the turn of the century, hospital construction becomes more specialised. The architect Jean-Baptiste Dewin can be considered a trailblazer. In 1903 he built the clinic for doktor Antoine Depage in Elsene with which he applies the principles of *La Construction des hôpitaux. Etude critique.* This disquisition establishes simple principles such as the need for collaboration between the physician and architect, the distribution of the number of beds and the relation between the surface area of the hospital and the number of occupants, the classification of the medical purposes and their specific needs, and the evaluation of the various types of pavilion constructions.

It advocated the use of modern materials and rounded corners with a view to better hygiene. Of the many hospital architects Gaston Brunfaut played a very important role in spreading the general principles behind the organising of public health and hospitals. He proposed type models inspired by the dissertation on modern hospital architecture, *Krankenhausbau in neuer Zeit,* by Heinrich Schmieden (1930). In many articles in the architecture magazines *Bâtir, Tekné, La Cité, Le Document* and *L'Emulation* he advocated an extreme centralisation and rationalisation, as well as a spread based on demographic criteria. He described very precisely the various functions of the hospital, the layout of rooms, the division of traffic flows, and the standardisation and the construction of a concrete and metal skeleton to reduce building costs. In the Héger-Bordet Institution which he designed together with Stanislas Jasinski, he applies these principles literally. The distance between the pillars forms the basis for the rooms and determines the constructive foundation. Moreover, the structure is designed in such a way that four floors can be added to the building without any additional structural reinforcement. The vertical communication, in the glass rotunda on the corner of the two wings of the building, are characterised by a broad spiral-shaped slope

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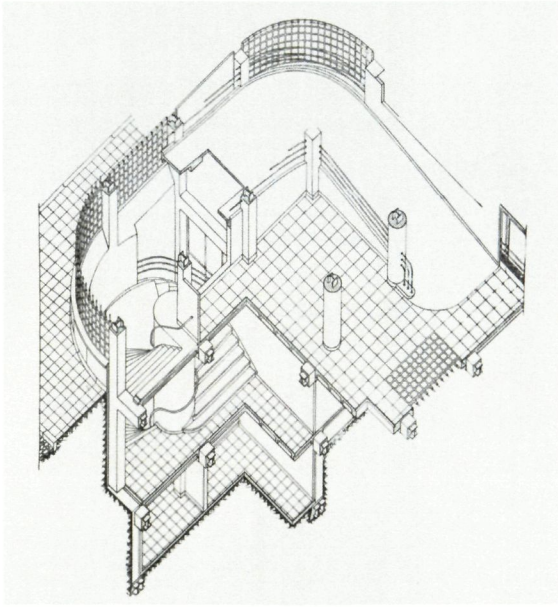
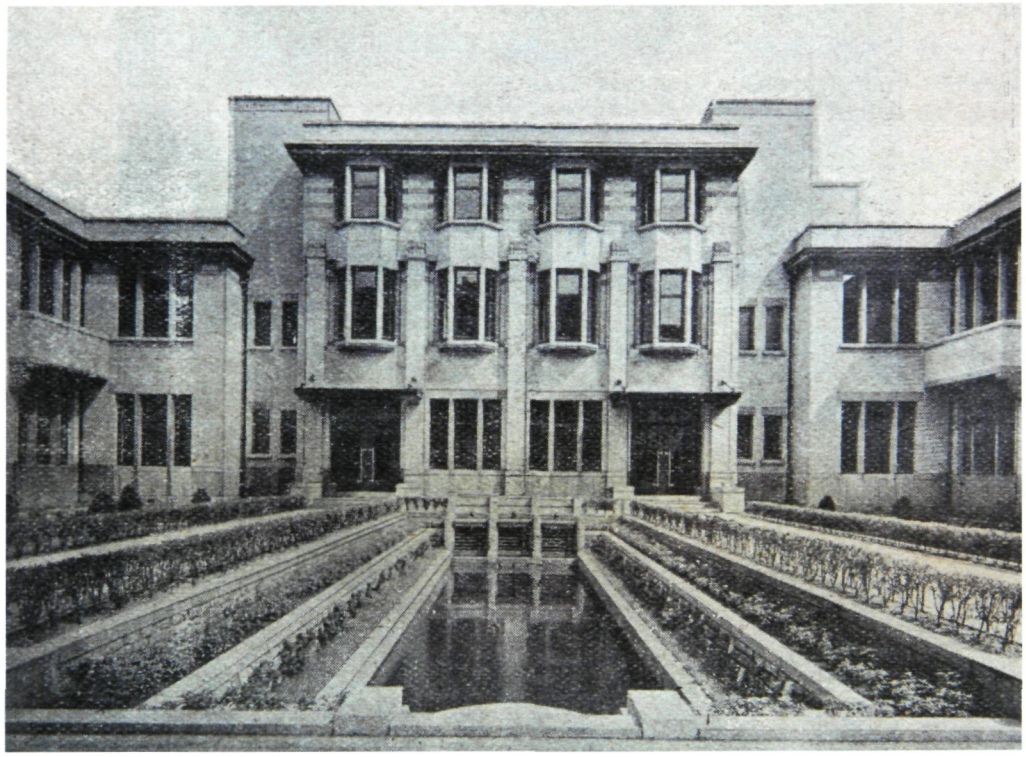
Héger-Bordet institute in Brussels (in *La Technique des Travaux,* march 1939, p.121)



Maxime Brunfaut, who was the nephew of Gaston Brunfaut, applied the same principles to the Lemaire Sanatorium in Tombeek. The construction consists of a concrete skeleton adapted to the base for the large rooms. Through the application of this regular construction system, the shell was finished within a period of five months and the building was completed in thirteen months. For Maxime Brunfaut, a firm supporter of Marxism, this was his favourite building; he was able to work without urban or spatial constraints, create the design in complete freedom and almost without budgetary restrictions and develop a socially inspired overall architecture. Unfortunately, this building, which is regarded as one of the manifestations of modernist architecture in Belgium, has been in a state of disrepair for many years now. The De Mick Sanatorium in Brasschaat by Edouard Van Steenbergen and the *Maternité Reine Astrid* in Charleroi, which is Marcel Leborgne's most important work, are also characterised by a constructive rationalism and cost-efficiency.



▶ Institute for tropical medecine in Antwerp (in *Het Ziekenwezen*, nr. 2, 1936, p.23)

The abovementioned examples all belong to the modernism of the International Style or packet boat style. Other hospitals on the other hand reflect the various architectural movements during the interbellum: art deco, regionalism, traditionalism, Dutch influence and monumentalism. Some examples resemble austere barracks in a sober monumental art deco style, like the sanatorium in Sijsele, the Institute of Tropical Medicine in Antwerp, the sanatorium in Lemberge or the more traditional sanatoriums, Georges Brugmann in Alsemberg and Rose de la Reine in Buizingen. For the French Queen Elizabeth hospital in Sint-Agatha-Berchem Gustave Maukels used the beaux arts style after the example of François Mansart. In other buildings we see functionalism and brick architecture as in St Joseph's Clinic in Essen.

MEDICAL BACKGROUND

The end of the 19th and the beginning of the 20th centuries were characterised by an increase in the specialisation of medical disciplines. These specialisations also meant a greater mutual interdependency which meant that various hospital services had to be combined, which, in turn, meant spatial reorganisations. The belief that distance between the services was the best solution to avoid an unhealthy environment, radically changed with the discoveries in the fields of bacteriology and microbiology. The work of Louis Pasteur, Joseph Lister and Robert Koch in particular, demonstrated that the greatest dangers of infection were contact-borne microbes. The principles of air hygiene and the distance between the services were no longer valid. The notion that fighting concentrations of microbes and strict hygiene in the various hospital systems are the best way to avoid infections was gaining ground. New materials like linoleum, glass, metal, and glazed porcelain completely met these requirements. The medical journal *L'assistance hospitalière/Het Ziekenhuis wezen* (the later *Hospitalia)* published various articles on international and Belgian architecture and argued in favour of close collaboration between architects and physicians.

POLITICAL AND INSTITUTIONAL CONTEXT

In the 19th century although various institutions were established in the field of public health, it was mainly the High Council for Hygiene, founded in 1849, who had the greatest influence on choices regarding public health and the building of hospitals. During the interbellum the Council still favoured pavilion-type buildings which was not in accordance with the opinions of doctors and hospital architects who were in favour of hospitals

▲ Sanatorium Sint-Elisabeth in Sijsele (photo K. Vandevorst)

▲ Dental institute George Eastman (1935) by architect Michel Polak in Brussels (photo K. Vandevorst)

▲ The Maternité Reine Astrid in Charleroi (in *Hospitalia*, nr. 8, 1939, cover)

built in blocks. The General councils of churches, founded at the start of the 20th century, were responsible for ordering new public institutions and the organisation of hospital care. In 1925 these councils became the Committees of public relief.
The first four decades of the 20th century were characterised by great progress in social achievements and the democratising and specialisation of medicine. Social modernisation and democratisation were the pet subjects of the socialist movement which advocated mutual solidarity. The growing importance of the socialists in politics, their first participations in government, the reorganisation of numerous working-class societies into powerful federations, and the efficient organisation of unions and national health service all contributed towards the achievement of this social programme. During the interbellum public health gradually came under the control of the state. In the 19th century government policy regarding public health concentrated mainly on fighting epidemics by way of hygienic regulations and large

vaccination campaigns. During the interbellum there was a focus on large-scale preventative medicine, the promotion of a democratic, specialised medicine and the organisation of the National Health Service.

In 1920 the socialist Minister of Labour Joseph Wauters approved a law granting state subsidies to the National health Service and extended their field of action. This empowerment of association funds and the National Health Service promoted democratisation and the centralisation of health care, and led to the organisation of an extensive network of health centres owned by the National Health Service and so provided as many people as possible with specialised, preventative and curative medical care. The socialist architect and politician Fernand Brunfaut built the César De Paepe hospital in Brussels and the Moyson hospital in Ghent which has since been demolished. The guiding principles here were spatial rationalisation and cost savings, as well as the creation of good working conditions for the medical staff and an optimal comfort for the patients. The aim was indeed to organise a serial medicine where *" everything must be united to ensure a provision of services that is quick and well-organised".*

In 1936 a separate Ministry of Health was finally established, during the government of Paul Van Zeeland, and this coordinated the services which had formerly been spread out. The first person to hold office in this new ministry was none other than Emile Vandervelde, a passionate defender of social medicine. In 1936 he stated: *"My fundamental principle is that the operation of hospitals or care institutions must be able to depend on government support if they are accessible to everyone".* Among the most important government initiatives were the introduction of preventative cancer research from 1936 onwards, the foundation of the Witgele kruis in 1937 but especially the building of numerous care centres. From 1935 the department of economic recovery stimulated the building and modernisation of various care centres by way of subsidies. However not all operations were terminated through a lack of funds or the outbreak of war. The state appropriation and bureaucratisation of preventative and curative medicine was denounced by the free association of physicians who were gradually forced to outsource the diagnosis and treatment, with Doctor Henri Schwers as their strongest and most influential advocate. It was only in 1938 that they were granted official status with the founding of the Association of Physicians.

THE FIGHT AGAINST TUBERCULOSIS

The fight against tuberculosis can be regarded as the origin of the modern public health policy. This fight had been a political priority for many years. At the end of the 19th century this disease acquired catastrophic proportions: about 12% of the total number of deaths in Belgium was the result of tuberculosis. It was Doctor Gustave Derscheid who established a free tuberculosis clinic in Brussels in 1897. In 1898 he founded Work against tuberculosis and began organising the detection of tuberculosis. The main aim of the Federation against tuberculosis, founded by Eugène Dewez in 1900, and of the Work for the protection of the child against tuberculosis, founded by professor Jules Bordet in 1911, was to set up consultation bureaus, preventoriums and sanatoriums. The architect Masure of the architecture department of the Federation designed a type model and advocated a functional and explicit modern style. Examples are the consultation bureaus of Wandre and Seraing by Joseph Moutschen an architect from Liége, which is built in a style that combines art deco with brick modernism. The Federation erected around twenty preventoriums and about thirty sanatoriums. Most of them are located in rural areas, in The Ardennes or on the coast and complied with the conditions of good orientation and clean air. These buildings are generally built in a traditional indigenous style, like the Georges Born Preventorium in Wenduine and the Vrolijk residence in Klemskerke, although some of them also have a modernistic slant such as St Joseph's in Pulderbos, Léon Poriniot in Biez and Edouard Pécher in Sint-Idesbald. The various services and departments responsible for public health published numerous reports on the building of sanatoriums. The architects Putzeys and Maukels in *Construction et Aménagement des Sanatoriums* for example, advocated cost reduction through standardisation and the use of new building techniques and materials to stimulate a coherent building policy on a national level.

CONCLUSION

The evolution of the building of hospitals during the interbellum depends on the evolution of medicine, of the way in which the state organised public

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Children's waiting room in the dental institute Georges Eastman in Brussels with painted frieze by Camille Barthélémy and bronze birdcage (in *Hospitalia*, nr. 3, 1939, p. 55)

▲
Sea preventorium in De Haan (1933) by architect Georges Dedoyard (photo K. Vandevorst)

health care and on the evolution of building techniques and architectural styles. Various architects and doctors specialised in this typology which was extremely important for social modernisation; they worked together and devoted themselves to the ratonalisation of hospitals. The block form gradually became more popular despite the fact that most buildings were still characterised by a pavilion-type structure. The fight against tuberculosis and the construction of an extensive network of care centres perfectly illustrates the dynamics which prevailed and the use of new building techniques. In this respect hospital architecture can be regarded as a forerunner in the application of the achievements of modernism and deserves a place of honour in the history of architecture during the interbellum

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BIBLIOGRAPHY

BALTHAZAR H. (ed.), *Les années 30 en Belgique. La séduction des masses* (tent.cat.), Brussel, 1994; BONENFANT-FEYTMANS A.M., *L'Evolution des Hôpitaux à Bruxelles*; BRIDGMAN R., *L'hôpital et la cité*, Parijs, 1963; CHEVAL V., DEPAGE A. en VANDERVELDE P., *La construction des hôpitaux. Etude critique*, Brussel, 1912; DELORE

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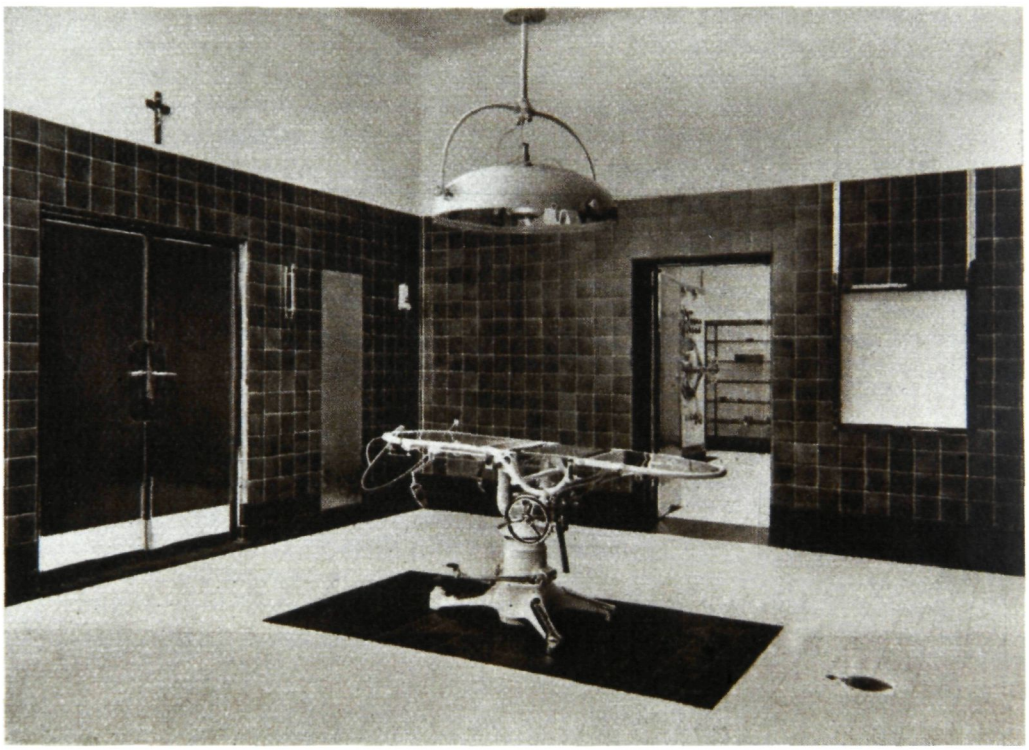
Operating room of the Sint-Jan en Elisabeth institute in Brussels (in *Bâtir*, nr. 18, 1934, p.702)



P., *L'hôpital humanisé*, Paris, 1959; DEMANET M. et HENNAUT E., *Le visage de la médecine. Un siècle d'architecture hospitalière 1820-1940*, in *Art et architecture publics*, Sprimont, 1999, p. 80-87; HALIOUA B., *Histoire de la médecine*, Parijs, 2001; HOËT T., *L'hôpital confronté à son avenir. Actualiser l'hôpital et le préparer au XXIe siècle*, Parijs, 1993; KREMER J.-F., *Une analyse critique de la démarche architecturale de Marcel Leborgne* (onuitg.verh. La Cambre), Brussel, 1988; PEIREN L., *César De Paepe. De l'utopie à la réalité*, Brussel, 1990; *L'Exécution du Plan du Travail*, Antwerpen, 1935; RULOT H., *Rapport concernant la construction des hôpitaux, Ministère de l'Intérieur et de l'Hygiène*, Brussel, 1922; SAND R., *Les perspectives de la Santé publique en Belgique*, in *Le Progrès Social*, 46, 1937; SCHMIEDEN H., *Krankenhausbau in neuer Zeit*, Kirchhain, 1930; SONDERVORST F.-A., *Geschiedenis van de geneeskunde in België*, Brussel, 1981; VAN DEN EECKHOUT P. en VANTHEMSCHE G., *Bronnen voor de studie van het hedendaagse België, 19de-20ste eeuw*, Brussel, 2001; VAN LERBERGE R., *De geschiedenis van Bond Moyson. De betekenis van de mutualiteit in de ontwikkeling van de Gentse arbeidersbeweging*, Gent, 1979; VELLE K., *Arts, geneeskunde en samenleving: medicalisering in België in de 19de en de 20ste eeuw* (doct.verh.), RUGent, 1988; VELLE K., *Bronnen voor de medische geschiedenis: de Belgische medische pers (begin XIXde eeuw - 1940)*, in *Annalen van de Belgische Vereniging voor de Geschiedenis van de Hospitalen en de Volksgezondheid*, 1988, p. 68-117; VERHOEVEN W., *Sanatoriumbouw in het Interbellum. Een vergelijkende studie naar de bouw en de verdere evolutie van sanatoria uit he Belgische interbellum* (onuitg.lic.verh.), VUBrussel, 2001; *Patrimoine hospitalier. Un parcours à travers l'Europe*, Parijs, 2001.

MAGAZINES

Architecture d'Aujourd'hui; L'Assistance Hospitalière / Het ziekenhuiswezen; Bâtir; Hospitalia; Techniques des Travaux, L'Emulation.

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Original entrance of the Héger clinic, corner of the Wolstraat-Breughelstraat (in *L'Emulation*, jg. 59, nr. 4, 1939, p. 53)

Paul Dierckx

HISTORY OF SANATORIUMS IN BELGIUM

▶ Aerial photo of the Sint Elisabeth sanatorium in Sijsele (© Elisabeth hospital in Sijsele)

In the 19th century the whole world was plagued with tuberculosis resulting in a striking number of deaths. However, the improvement of social and economic conditions at the end of the 19th century undoubtedly played an important role in driving back the tuberculosis-endemic.

Most physiologists confirm that the only chance of a cure for certain tuberculosis patients was for them to take a rest cure and hygienic-dietary cure in a sanatorium

The idea of tuberculosis patients undergoing a hygienic-dietary cure in combination with additional medication dates back to the 18th century. The first person to come up with the idea of a closed hospital setting was Herman Bremer, who set up the first sanatorium in Gerbersdorf in Germany in 1854. One of his assistants, Dethweiler, supplemented this treatment with a rest cure in which patients sat in reclining chairs on an outdoor gallery. He founded the Falkenstein sanatorium in 1876.

In Belgium the first sanatorium was opened in Bokrijk in Limburg in 1896. This was followed by the establishment of about thirty sanatoriums all over Belgium by religious, private or medical care organisations. They all had the same aim, namely to give tuberculosis patients the opportunity to undergo the only treatment available at the time: seclusion in clean air, absolute rest and the observance of certain hygienic rules under medical supervision. To achieve these goals sanatoriums were built in wooded areas outside the cities, at a certain altitude for patients suffering from tuberculosis of the lungs and by the seas for those who had tuberculosis of the bones. The galleries on which patients taking a rest cure sat in deck chairs, were south facing and the rooms had to open out onto wide, well-lighted and well-ventilated corridors. They contrasted sharply with public sanatoriums which were built thanks to the magnanimity of wealthy patients or generous donators.

▲ Joseph Lemaire van Tombeek sanatorium in Overijse (in *Technique des Travaux*, 1, 1938)

▲ Postcard of the sanatorium of Borgoumont in Stoumont (collection P. Dierckx)

▲ Postcard of the sanatorium Les Pins in La Hulpe: pavilion for men (collection P. Dierckx)

In most sanatoriums the task of the doctors was limited to adhering to a special discipline, namely regulating the number of hours patients spent in the deck chairs for a rest cure, enforcing rules of hygiene which included the use of spittoons, or ensuring that the rooms were well ventilated. The doctor, or often the medical student, was in charge of the patients during the cures. His task included making their stay in hospital more pleasant so that they did not suffer inordinately from their isolation. The discovery of anti-tuberculosis antibiotics (streptomycine in 1945, isoniazide in 1950) meant the end of the sanatoriums in their fight against tuberculosis. Today many sanatoriums have been converted into care institutions for the elderly.

BIBLIOGRAPHY

PRAET G., *La Lutte Antituberculeuse en Belgique*, Brussel, 1943; KNOPE S.A., *Les sanatoria. Traitement et Prophylaxie de la Phtysie Pulmonaire*, 2de uitg., Parijs, 1900.

René Van Tiggelen

MILITARY HOSPITALS

The Saint Laurent abbey in Liège served as a military hospital in the period between 1792-1993 (photo G. Focant © MRW)

"A peste, fame et bello, libera nos, Domine"
Oh Lord, deliver us from the plague, famine and war.

A war disaster is always a catastrophe because in it man is just as helpless as when he is fighting epidemics and famine. It has always been the army's task to help wounded soldiers. Whether this was done in a rudimentary or well organised manner depended on how well organised the army units were and especially on the involvement and financial possibilities of the warlord and on the status of medical and surgical sciences. The Roman army already had a medical service. Garrisons guarding the imperial frontiers along the river Rhine also had their own hospitals. These organisations disappeared with the fall of the Roman Empire. With the rise of the feudal system, marauding gangs hardly met the necessary requirements for the expansion of hospitals. Only the populace and the monasteries showed any pity for the suffering of those who had been wounded. It was Isabella of Castile, grandmother of Charles V, who set up the first mobile field hospital in 1476. This idea was adopted by the armies of emperor Charles. After his death Margaret of Parma established a permanent military hospital at Bernard de Merode's court of Saxony in Mechelen in 1567. Some fortresses, such that as in Philippeville, even had rudimentary medical units staffed by barbers! In 1585 Alexander Farbese decided to establish a royal military hospital under St. Rombold's Cathedral in Mechelen where it continued to function until 1701. When it closed down a royal field hospital was established in the convent of the black sisters in Bergen.

When the power of the Spanish army in the Netherlands began to wane, French ideas began to take hold. Shocked by the sight of old, maimed, soldiers wandering about clothed in rags, count Jean-Baptiste de Brouchoven de Bergeyck, wished, albeit on a smaller scale, to follow the example of Louis XIV's *Hôtel des Invalides* (1638-1715) by founding a home for invalids in Ghent but this idea was not adopted by others. In 1706, following his victory in Ramilies, the Duke of Marlborough took over power in Ghent. From 1701 to 1713, British troops set up permanent military hospitals in the cities. In this way fortified settlements like Bruges, Diksmuide, Ghent, Louvain, Liège, Mechelen, Namur and Tienen acquired their

hospitals. Through the Treaty of Utrecht in 1715, the Netherlands came under the rule of Charles VI. The forts at Dendermonde, Doornik, Ypres, Knokke, Menen, Namen, Veurne and Warneton each acquired their hospitals.

In 1744 there was a growing threat from the French. The English withdrew some of their troops from Germany and deployed them to the Netherlands. Here they set up field hospitals in monasteries requisitioned for this purpose, as had happened in Antwerp, Bergen, Brussels, Doornik and Ghent. Charles VI wished to equal the generosity of Louis XIV and opened a *Hotel des Invalides* in Vienna. When Maria Theresa of Austria became empress she was advised to decentralise. A home for invalids housed patients in a section of the old royal military hospital of the Spanish army in Mechelen from 1751 to 1775. In that year the former Jesuit monastery in the Keizershof was charged with caring for invalids and establishing a hospital. In 1792 the victory of general Dumouriez in Jemappes effected the annexation of the Austrian Netherlands and the principality of Liège.

Apart from five large military hospitals of the Belgian army in 1830 (Antwerp, Brussels, Ghent, Louvain, Liège), mention should be made of the other nine that were set up at the time of the Convention (Ath, Bruges, Doornik, Mechelen, Namen, Sint-Truiden, Tienen, Tongeren). A start had already been made on building new military hospitals, many of them forerunners of their time, such as those in Beverlo (1841), Brussels (1882 and 1974), Doornik (1886), Antwerp (1898) and Oostende (1910).

After the demolition of the Brussels military hospital in Kroonstraat and the closure of other hospitals in the 90s as a ratification of a policy of 'No more war!', the military hospital of Neder-Over-Heembeek was dismantled. Nevertheless, Cicero wrote: "*Si vis pacem para bellum*" (he who wants peace prepares for war)!

◄ Military hospital from the 19th century in Antwerp (photo K. Vandevorst)

◄ The Paedagogium Falconis (De Valk) of the Leuven university, in theTiensestraat, has a long military history (photo K. Vandevorst)

◄ Detail of the military hospital in Philippeville, L-construction from the second half of the 18th and 19th century (photo F. Dor © MRW)

BIBLIOGRAPHY

EVRARD E., *Esculape aux Armées*, Brussel, 1997.

Patrick Allegaert and René Stockman

THE BIRTH OF THE PSYCHIATRIC INSTITUTION

The front of the chapel of the Bethaniënhuis in Zoersel (photo K. Vandevorst)

"*Before the end of the 18th century there was no psychiatry*", wrote the Canadian historian Edward Shorter. However, since Greek antiquity there have been individual cases of doctors who were involved with caring for the insane. Manuals were written on the subject. However psychiatry as a term or practice or field to which a group of doctors with a common sense of identity were dedicated, simply did not exist. There were no psychiatric hospitals in the medical sense of the word.

Nevertheless there have always been mental disorders. Five centuries BC the Greek surgeon Hippocrates described them as follows: "*The brain is where we find the seat of the madness and insanity, of the fears and terrors that assail us.*" As psychiatric diseases can partly be the result of biological and genetic causes they are as old as man. Society has always known psychiatric diseases and has always sought ways of dealing with them.

HOME

From time immemorial the insane have been the responsibility of the family. In *The Laws* Plato wrote the following: "*If someone is mad he may not walk freely around the city but his family must support and watch over him as well as they*

possibly can." This 'support and watch over' was not without its problems however. It is best to abandon any romantic ideas we may have about insanity in days gone by: people were generally very intolerant of anyone who did not conform with current social norms. Indeed, the family had to carry out a task that was little appreciated. The British historian Roy Porter writes; *"The insane and 'village idiots' were generally left to the care – read in many instances to the negligence and cruelty – of their family members who put them in the cellar or shut them up in a pigsty, sometimes under the supervision of a servant. Families were deeply ashamed of insanity because it was associated with being possessed by the devil or with a congenital defect."*

The first urban hospitals came into being around 1200; initially the poor and the sick were housed here. Some institutions expressly refused to admit people suffering from *uytsinnichheyt* ('frenzy' or 'hysteria'). In other hospitals there were special houses for the mad and in some cases special mobile *madhouses* were set up. They were used for people who needed to be temporarily isolated, drunks, people who disturbed the peace at night, troublemakers. The city took on the responsibility of facilitating isolation. It was assumed that mental patients, for whom the situation at home had become impossible, also ended up in these mad houses.

René Stockman, curator of the Doctor Guislain Museum, points out the primary role monasteries played in caring for the mentally ill. He links it to the Poverty Movement in the 13th century. "*In our regions the shift towards experiencing poverty coincides with the development of the cities, so that the members of these locations are also known as urban monks. In the cities themselves several new forms of monastic life developed which also played a role in the care of the mentally ill (...) In Ghent, hospital sisters worked in St John's Hospital as early as 1191'* . Figures like Johannes de Deo (1495-1550) inspired brothers in Spain, Portugal and Italy to begin caring for the poor who were sick and suffered from mental illnesses. The psychiatric institution in Ghent, St. Jan de Deo was named after this saint. In this context we can also mention the order of the Alexian brothers or cell brothers, a movement that developed in the 14th century and focused on various apostolic works, whose main aim was to care for the sick and suffering. In the earliest communities caring for plague victims and burying the dead played a central role. From the 16th century however, and in view of the fact that caring for plague victims was associated with certain periods, the Alexian Brothers also gave shelter to the mentally ill. In the 19th century many monasteries of the Alexian Brothers in Belgium developed into institutions that provided care for the insane. A special form of care, which already dates back to the 15th century, can be found in Geel: the mentally ill are no longer locked up in institutions but placed with host families.

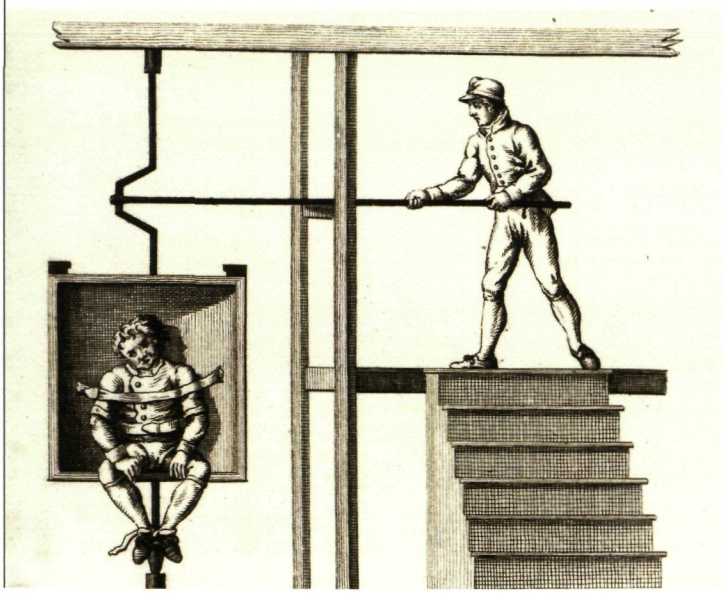
▼
The castle of Ruyff-Baelen (17th -18th century) in Welkenraedt, psychiatric hospital since 1875, led by the alexians (photo G. Focant © MRW)

COMMERCE AND MADNESS

The need to 'put away' the insane must have been great and the amount of accommodation available, inadequate. In 17th-century urban Europe the rise of private, frequently religiously inspired, institutions was not so much the result of the actions of the state as a side-effect of social commercialisation and professionalisation. It was based on need. The establishment of these private mental hospitals is certainly not the result of a central policy but that of a complicated process of negotiation in which the need, rights and responsibilities of various parties played a role. Interment (and discharge) were still the result of a fairly complex haggling between the family, local authorities, the courts and the director of the institution itself. There was no official procedure but rather one of arbitrariness. It is difficult to find out the true facts regarding the atmosphere and quality of life in these hospitals: both the family of the patient and the director favoured secrecy. There were sharp complaints of callousness, greed and filth. But at the same time there were pleas in favour of these private hospitals.

Private madhouses in the 18th century, which, it is true, partly came into being for commercial reasons, were also a breeding ground for the development of psychiatry as a skill and a science: "*Mental institutions were not set up for the practice of psychiatry. On the contrary, psychiatry developed as a way of dealing with the patients there.*" Although there was no theory regarding the direct dealings of doctors and other owners of these institutions with the mad inmates, they were characterised by a concrete search for ways to deal with people who were mentally ill.

▼ Rotation chair (in Guislain J., *Traitésur l'aliénation mentale et sur les hospices des aliénés*, Amsterdam, 1826) (collection Museum dr. Guislain)



TREATABLE

For many years the insane were seen as no more than wild animals which had to be tamed using harsh measures and so, since time immemorial stereotype therapies and medicines have been applied: physical coercive methods, bleeding, emetics and purgatives. Nevertheless, a better practical approach and experiences in mental institutions gave cause for growing optimism. It was generally claimed that a well designed and well run institution was the best way to help the insane regain their mental health. The British doctor William Batti wrote the following in his *Treatise on Madness* in 1758: "*Insanity is as treatable as any other disorder.*"

Increasingly, the strict medical and primitive treatment was abandoned and replaced by looking for a solution in a moral and psychological approach, which boiled down to trying to graft life in the institutions onto community life in a domestic environment. The staff lived, worked and took their meals together with the patients, their healing was stimulated with praise and blame, rewards and punishments.

Attracting by far the most attention were the reforms of the French doctor Philippe Pinel who worked in the hospitals of Salpêtrière and Bicêtre in Paris. He derived his inspiration from the ideals of the French Revolution: freedom, equality, fraternity. In 1793 he freed, both literally and figuratively, the patients of their chains. Pinel saw insanity as a mental disorder which could also be relieved by way of psychological means. The aim of psychiatry was to reanimate reason and moral awareness.

REPAIRABLE

An improved and modernised practical approach, the ideas of the French revolution and the optimism of the Enlightenment marked a radical change in the care of the mentally ill. It was part of a broader vision. Erwin Mortier writes the following:

▲
Picture of doctor
Joseph Guislain
(© Museum
dr. Guislain Gent)

"The Enlightenment regarded society as something that could be repaired and this applied to the civilian too, he was considered educable. Man, every man, could more or less literally be brought to reason. (...) Modern psychiatry was pre-eminently an 'enlightened' discipline. The former 'madman', who up to now had been a creature shunned by society, was given the status of someone who was ill, and this meant that he could be treated and cured."

The criticism of existing private madhouses did not result in their abolishment but in their rebirth as a psychiatric institution. In the Code Napoléon and in the law of 1838 the departments in France were obliged to establish public institutions or to provide adequate facilities. This was also the situation in Belgium twelve years later.

This law, implemented on 18th February 1850, was mainly prepared by Joseph Guislain (b. 1797 Ghent) and Edouard Ducpétiaux (b. 1804, Brussels). Ducpétiaux was inspector general of Belgian prisons, charitable institutions and correctional schools, and had high praise for the practice which Joseph Guislain developed together with the Brothers of Love of canon Triest. The doctor and high official ensured that the following issues were subject to law: there is a moral treatment in which the doctor plays the central role. Then there is hospitalisation in an institution which is described as preferable, so that the patient admitted is given the opportunity to isolate himself from the world in which he is subject to influences that make him ill. An important aspect here is the division of the sick into categories based on symptoms in which they are described as 'quiet', 'agitated' , 'incurable' and 'epileptic'. The importance of a good isolation is also mentioned. Great importance is attached to therapy in which the emphasis is on a gentle treatment and a condemnation of aggressive coercive means. The manner of admission to hospital is fixed. In cases of mandatory admission or collocation, this must be done in collaboration with the family members involved, the GP and the mayor in which the responsible 'head doctor' of the institution can pronounce the collocation following a careful observation. In this way an attempt was made to counter any arbitrariness on the part of the council.

◀
Large hallway in the
Onze-Lieve-Vrouw
hospital
in Bruges

Coercive means were increasingly replaced by persuasion, chains were put away, and respect for the person who was mentally ill became the new creed. Doctors were trained at universities (*aliénistes*), specialised in treating the mentally ill. Catholic congregations, such as the Brothers of Love of canon Triest, were responsible for organising the care.
Guislain and Triest were both convinced that a merging of a scientific approach and religious belief was a guarantee for the best quality care. The fact that this did not please various institutions is clear from the fierce reply that came from canon Maes, director of the St Julian Institution in Bruges and founder of the Sisters of Mercy who consciously refused to have anything to do with any medical interference in the institution. Needless to say the conflict was resolved to the benefit of those who were supported medical expertise. However in some cases this did not take place until WW II.

▼ 19th-century front of the Onze-Lieve-Vrouw hospital in Bruges, led by the sisters of Mercy (photo K. Vandervorst)

FAITH IN BUILDINGS

The strong development towards more psychiatric hospitals fitted in with the ideas of positivists, bureaucrats, utilitarians, doctors and lawyers who believed firmly in institutional solutions and even in buildings. They believed that schools, prisons, hospitals and institutions could control and offer solutions to problems caused by demographic evolutions, urbanisation and industrialisation.

Nowadays we take it for granted that one can interpret the function of a building. Nevertheless, the idea that before designing a building one has to analyse every facet of its purpose in a manner that is almost scientific is clearly based on the evolution of architecture and urban development. The Dutch architectural historian Noor Mens wrote: "*This belief erupted for the first time in the last quarter of the eighteenth century, first in France and for the first time in the designing of hospitals.*" When thinking about the architecture of institutions it is important to guarantee maximum safety, good ventilation, proper sewerage and optimum possibilities for observation. The British philosopher Jeremy Bentham, one of the founders of utilitarianism, proposed *Panopticum* as a model in around 1750. The teacher of urban development Bruno De Meulder wrote: "*The principle of the panopticon is as simple as it is discerning: a circular building with in the centre a tower with large windows giving one an overview of the inner side of the ring. The ring itself comprises several cells with a glass wall on either side. Thick walls separate each cell and isolate them completely from one another. The light filters through every cell and from the tower the silhouette (…) is always visible. On the other hand, there is no visibility from the other side so that the automatic functioning of authority is always guaranteed.*" Although very few psychiatric institutions were built according to Bentham's blueprint, his vision of the exercising of power through the architecture of the institution had great influence. Applied to the psychiatric institution the main function of the architecture, freed from its traditional idiom of art, was to organise various tasks and institutions both functionally and spatially. For instance, in thinking about the modern psychiatric hospital it is very important to introduce classification and planning. For instance separating men and women, curable and incurable patients, violent and non-violent and clean and dirty patients.
Besides this there is the problem of the 'unpleasant smell'. Densely populated, smelly areas are a

◀ Ward in Caritas in Melle (collection Caritas Melle)

◀ Administrative building and water tower of the University psychiatric centre Sint Kamillus in Bierbeek (photo K. Vandevorst)

breeding ground for most contagious diseases. The cause is harmful miasmas which are a threat to the proper balance of body juices. This goes back to the views of Galenos from the 2nd century. The best remedy is to literally blow away all these evils. Hospital projects may be regarded as 'gigantic ventilation installations'. The aim of building separate buildings outside or on the outskirts of the city is to create a healing, social environment.
It should be noted that a strong cooperation developed between doctors and architects. Architects and doctors address the question regarding the ideal form of these buildings, their lighting, ventilation, the arrangement of hospital beds, the size of doors, windows, stairs and so on. In connection with this Eddy Muyllaert even talks about how the role of the architect is to serve. "*Now designers place their stamp on their design. In the 19th century architecture the role of the architect was to serve the client with regard to the function of the building, and to the society which ultimately continued to be confronted with it*" In a concise plan we elaborate several typical examples of early 'psychiatric architecture' model institutions. In this way this form of 'interdisciplinary cooperation will become clear *avant la lettre.*

PARIS: CHARENTON – CARRÉ ISOLÉ

Many therapeutic ideas play a role in selecting a location for the building. Philippe Pinel believed in the importance of isolating the cause of madness and in this respect the countryside would seem to be the best option. This offered even more advantages: the performing of farm work for example. As a supporter of romantic medicine he therefore attached great importance to a contact with nature. His successor Esquirol built the new Charenton together with Emile Gilbert and this, in compliance with the law of 1838, was extended to form a symmetrical complex. This occurred in Charenton on a large scale: two times four connected squares with rooms for patients on three sides and one open side. Running between the two rows was a sort of 'service street'. The central section linked both squares, and had service buildings as well as a chapel in the centre of the upper terrace. On the left was the accommodation for male patients and on the right the women's

section. Further differentiation was possible in each courtyard. There was even central heating.

"*As far as style is concerned Charenton is a cross between a rich classicism and an economic, uitilitarian view of architecture.*" The friendship between Emile Gilbert and Guillaume-Abel Blouet (who was responsible for the restoration of the thermal baths of Caracalla in Rome) probably lay somewhere in between: Blouet excelled in what at the time was considered the academy of classicism. Early on in the thirties both friends switched to the ideas of Simon and a purely functionlistic idea of architecture which they reconciled with the classical idiom.

GHENT: JOSEPH GUISLAIN AND ADOLPHE PAULI

Doctor Joseph Guislain from Ghent opted for a new building. This was the only conclusion he could reach based on his preliminary investigation and on his practical experience as an innovator. In his study of existing institutions in Belgium he concluded that not one institution met the minimal conditions required for treating patients who were mentally ill. As far as location was concern he opted for an open rural area on the outskirts of the city. He and the architect Adolphe Pauli from Ghent were a good team. Pauli clearly states that architecture should take science more into consideration. The plan was a typical example of a rational and functional system plan camouflaged by a setting inspired by a historicizing repertoire.

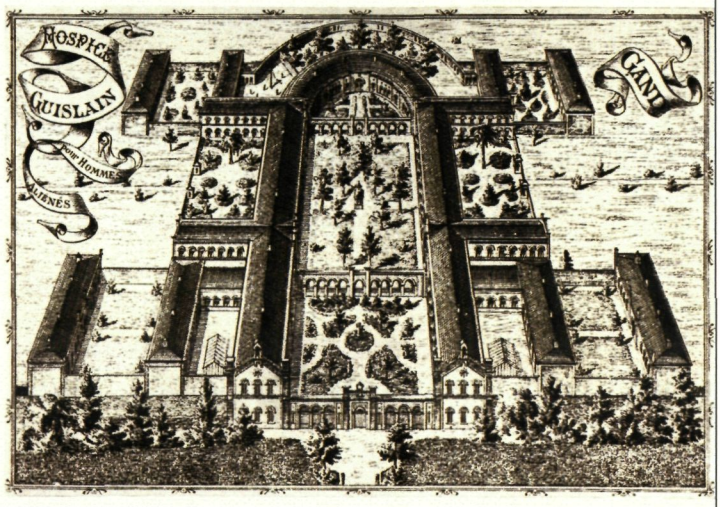
▼ Front of the dr. Guislain institute in Ghent (photo K. Vandevorst)

We shall examine the basic ideas and main features of this plan more closely in a separate section of this book. As far as Guislain is concerned he was convinced that architecture should form the best ever tool for the new therapeutic approach. Adolphe Pauli found no difficulty in following his ideas. The institution named after Guislain served as a 'model institution' in many ways.

CONCLUSION

The 19th century began very optimistically regarding the treatment of the mentally ill. It was considered a moral duty and was part of a wider control over man and society. Reformers, like civil servants, doctors, lawyers and architects formed the basis of this reform. There may have been some scepticism right at the start. Indeed, in his *Leçons orales sur les phrénopathies* Guislain points out the danger of an accumulation of people in poorhouses, prisons and institutions: '*One half of the nation has armed itself against the other*". During the last decades of the 19th century (in Belgium more the start of the 20th century) this turned into a new pessimism: the institution was not a panacea, see for example the disappointing figures for those discharged. The psychiatrists were victims of their own propaganda: rehabilitation proved to be more problematic than they had thought. The climate in the institution was experienced as negative: overpopulation, a system of drilling without content, financial difficulties and a routine administration of medication. Nevertheless, all this did not lead to the closing down of psychiatric hospitals and during the course of the 20th century more, and less radical, alternative practices were developed. There was a search for new therapies. In Sleidinge for example hydrotherapy or the Kneip method was introduced into the psychiatric hospital at the end of the 19th century. "*Wherever a cure is possible, water will restore health*'. However the psychiatric hospital only developed in a way that was more radical in the second half of the 20th century, both as a model and also as architecture.

▼
Litho by F. Giele with the floor plan of the Guislain institute in Ghent (collection Museum dr. Guislain)



BIBLIOGRAPHY

SHORTER E., *Een geschiedenis van de psychiatrie. Van gesticht tot Prozac,* Amsterdam, 1997; KOPLAND R.. en VAN DEN HOOFDAKKER R.H., *De psychiater en zijn patiënt,* in KOPLAND R., VAN DEN HOOFDAKKER R.H., *Twee ambachten,* Amsterdam, 2003; PORTER R., *Waanzin. Een korte geschiedenis,* Amsterdam, 2003; STOCKMAN R., *Van nar tot patiënt. Een geschiedenis van de zorg voor geesteszieken,* Leuven, 2000; ALLEGAERT P., CAILLIAU A. en MORTIER E., *Met recht en rede. Waanzin tussen wet en kabinet,* Gent, 1997; ALLEGAERT P., CAILLIAU A. e.a., *Rede en waanzin. Het Museum Dr. Guislain in beeld en tekst,* Gent, 2001; STOCKMAN R., *De kerk en het verstoorde leven. De plaats van de religieuzen in de geestelijke gezondheidszorg,* Tielt, 1988; MENS N., *De architectuur van het psychiatrisch gesticht,* Wormer, 2003; LAMOTE L., *De architectuur van de psychiatrische inrichting. Sporen van internationale theorie in Belgische voorbeelden uit de negentiende eeuw,* Universiteit Gent, Academiejaar 2002-2003, Faculteit letteren en wijsbegeerte; DE PAUW N., *Een brokje geschiedenis* (over psychiatrisch ziekenhuis in Sleidinge), z.p., z.d.